CONFIDENTIAL

PM USA Operations

1992-1996

Five Year Plan

Major Programs

Don Leyden

January 1, 1992

CONFIDENTIAL

PHILIP MORRIS U.S.A.

INTER-OFFICE CORRESPONDENCE

Richmond, Virginia

To: Distribution **Date:** January 17, 1992

From: T. R. Campbell

Subject: 1992-1996 Plan - Major Programs

Our 1992-1996 Plan focused on actionable and reportable programs that would enable us to meet our strategic objectives. Enclosed you will find the complete listing of these programs.

The listing is organized by category (cost, capacity, etc.) with the programs sequenced by their A, B or C rating (A being the highest priority). In addition, the final pages list major programs by functional area.

In addition to your receiving this full summary, copies of the major programs for each functional area have previously been distributed to the respective Planner.

TRC:mwm
Attachment

2022950027

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MAJOR PROGRAMS

CATEGORY	SECTION
• CAPACITY/FLEXIBILITY	C
• COST/PRODUCTIVITY	D
• QUALITY	E
• SAFETY	F
• ENVIRONMENTAL PROTECTION	G
• ORGANIZATIONAL HEALTH	H
• PRODUCT DEVELOPMENT	I
• LEAF	J

FUNCTIONAL AREAS

- EMPLOYEE RELATIONS
- ENGINEERING
- LEAF
- MANUFACTURING
- MANUFACTURING SERVICES
- RESEARCH AND DEVELOPMENT
- TECHNICAL SERVICES

1992-1996 FIVE YEAR PLAN MAJOR PROGRAMS

Category: Capacity/Flexibility

Program Title	Functional Area	Department	Leader	Rating	Ref.
Cabarrus Expansion	Engineering	Process Eng	J. Pastorius	A	C-1
MC Primary Modernization	Engineering	Process Eng	S. Blackwell	A	C-2
Optimize RL/BL Process	Engineering	Mfg. Eng.	J. Gomes	A	C-3
Cast Leaf	R&D	Process Dev	G. Gellatly	A	C-4
NET Development	R&D/Eng	Tob Fund Div	Fischer/Wms	A	C-5
Improved Stem Capacity Increase	Engineering	Mfg Engineering	D. Ising	B	C-6
Retail Promotion Execution	Mfg. Services	Commercial Dev	M. Suter	B	C-7
Inventory Control Systems	Mfg. Services	Finished Goods	J. McKinney	C	C-8
Production Planning Simulation Model	Mfg. Services	PP&C	Bylsma	C	C-9

2022950030

11/15/91

Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: Cabarrus Expansion

Category: Capacity/Flexibility **Included in 1991-1995 Plan:** Yes

Start Date: 1st qtr 91 **Completion Date:** 4th qtr 95

Program Description

The Cabarrus Manufacturing Center is undergoing a major capacity expansion.
The facility infrastructure and Primary is being expanded to support additional cigarette manufacturing capacity of up to 75 billion units, from the current 85 billion to 160 billion.
Cigarette manufacturing capacity is being expanded by 40 billion units, from the current 85 billion to 125 billion.

Importance to PM-USA

The expansion provides capacity to meet the long-term needs of Philip Morris International. Flexibility is built into the expansion plan in consideration for the often volatile nature of international sales. Cigarette manufacturing capacity can be relatively easily expanded by an additional 35 billion units to meet either future growth or upside forecast.

Program Benefits

Provide cigarette manufacturing capacity to meet the long-term needs of Philip Morris International.

Program Leadership:

Functional Area Engineering **Department** Process Eng. **Program Leader:** JI. Pastorius

Support Required From	1992 Man-Years	Leadership Dept. (92)
Manufacturing - Cabarrus	10.0	30.0
Information Services	5.0	
Manufacturing Services	2.0	
Leaf	2.0	
Employee Relations	2.0	

Capital Requirements (92) $ 201,300,000 **1993-1996** $ 350,100,000 **650 Timing**

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Primary																				
Cigarette Manufacture																				
Other (Central Plant, Leaf Warehouses)																				

Detailed milestones are available.

2022950031

11/22/91

Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: MC Primary Modernization

Category: Capacity/Flexibility **Included in 1991-1995 Plan:** Yes

Start Date: 1st qtr 90 **Completion Date:** 1st qtr 94

Program Description

Complete the Primary modernization to support annual facility manufacturing capacity of 140 bil units. M/C Primary Modernization consists of a group of projects that are related to increased capacity, flexibility, and replacement/upgrade. The capacity projects remove all bottlenecks to provide a line speed capable of supporting cigarette production of 140 billion units.
The replacement/upgrade projects replace worn and obsolete equipment. Specific flexibility programs are being evaluated. Additional benefits are provided in cost reduction, safety, env. compliance.

Importance to PM-USA

Modernization of the M/C Primary was established as one of several major efforts to achieve the maximum practical capacity (334 billion) of our existing facilities.

Program Benefits

Enable the M/C Primary to support annual cigarette manufacturing capacity of 140 billion units without planned overtime by mid-year 1993. Replace worn and obsolete equipment that can no longer provide reliable production. Build in flexibility (non-DBC blends, exotic blends) to anticipate our changing market requirements. Improve flavor/blend security. Ensure compliance with safety and environmental regulatory criteria.

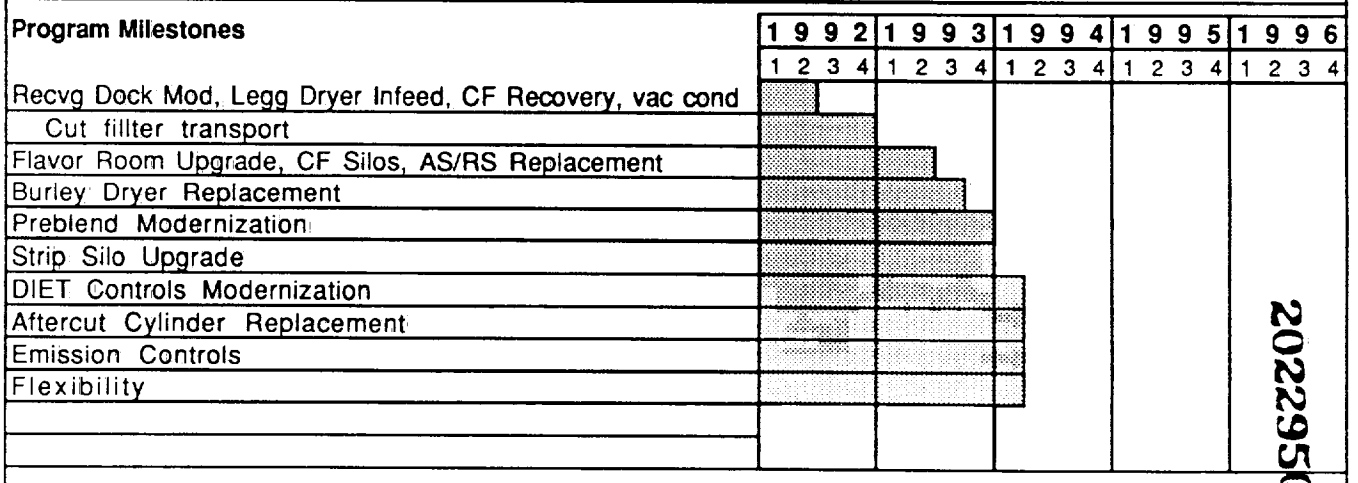
Program Leadership:

Functional Area Engineering **Department** Process Eng. **Program Leader:** S. Blackwell

Support Required From	1992 Man-Years	Leadership Dept. (92)
Manufacturing-MC	2.0	15.0

Capital Requirements (92) $ 41,300,000 **1993-1996** $ 29,100,000 **650 Timing**

Program Milestones



2022950032

12/13/91 Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: Optimize the Processing Capacity of the Existing RL/BL Facilities

Category: Capacity **Included in 1991-1995 Plan:** No

Start Date: Begun **Completion Date:** 3rd qtr 1995

Program Description

Develop process improvements and reduce bottlenecks at Park 500 and the BL Plant to increase sheet capacity and reduce processing costs.

Importance to PM-USA

During the 1992-96 Plan period, world-wide sheet product requirements are forcasted to exceed capacities of the existing plants. This program will provide sheet product capacity to support worldwide manufacturing requirements in the most economical manner.

Program Benefits

Provides capacity with the minimum capital cost to meet requirements through the plan period and reduces processing costs.

Program Leadership:

Functional Area Engineering **Department** Mfg. Engr. **Program Leader:** J. Gomes

Support Required From	1992 Man-Years	Leadership Dept. (92)
Manufacturing		4.0
R & D		
Leaf		
Manufacturing Services		

Capital Requirements (92) $ 4.4 million **1993-1996** $ 58.6 million **650 Timing**

Program Milestones	1992 1 2 3 4	1993 1 2 3 4	1994 1 2 3 4	1995 1 2 3 4	1996 1 2 3 4
PARK 500					
Alternate sheet cooling					
Process De-bottleneck Evaluation					
Process Consolidation/Controls Upgrade Implementation					
BL PLANT					
Increase main dryer speed (330 to 360 fpm)					
Increase forming belt width					
Fine grind dust/Higher solids slurry					

2022950033

11/15/91

Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: Cast Leaf Development

Category: Capacity **Included In 1991-1995 Plan:** Yes

Start Date: 4th qtr 91 **Completion Date:** 1st qtr 93

Program Description

Develop Cast Leaf as an alternative to RL and RCB should new sheet capacity be required. Cast Leaf is designed to be implemented in smaller capacity increments than RL, with less of an environmental impact, and is intended to provide some flexibility in the subjective character of the sheet.
Cast Leaf is a somewhat simplified version of the RCB process. The intent is to produce two sheets, one RCB type and one sheet using a natural binder to subjectively emulate a blend of RL/RCB.

Importance to PM-USA

Develop reconstituted cast leaf products that provide flexibility in meeting capacity needs for individual sheet types.
Optimize the current RCB process for sheet physical properties, production capacity, and environmentall goals.
Support R&D programs requiring non-standard sheet.

Program Benefits

Provides capability of meeting both RL and RCB needs; small (17mm lb/yr) capacity increments; Low process water influent/effluent; Low capital cost per lb. of installed capacity; Utilizes PME factory byproducts; More scheduling flexibility (less sensitive to startup/shutdown; Lower net sheet cost to the corporation.

Program Leadership:

Functional Area R&D **Department** Process Dev **Program Leader:** G. Gellatly

Support Required From	1992 Man-Years	Leadership Dept. (92)
PM-USA:Processing Plants	2.0	23.0
Engineering	1.0	(4 Dom; 19 Intl)
Leaf	1.0	
PME: R&D	0.5	
Leaf	0.5	

Capital Requirements (92) $ 30,000 Unknown **650 Timing**

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Pilot plant startup - 4th qtr 91																				
Optimize process RCB																				
Optimize process CL																				
Complete formulation development																				
Commercial plant design																				
Detailed program milestones available																				

2022950034

11/22/91

Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: NET Development

Category: Capacity **Included in 1991-1995 Plan:** Yes

Start Date: 1 qtr 91 **Completion Date:** 4 qtr 92

Program Description

Develop process to produce ET with less degradation and more tobacco-like taste than DIET
Develop a batch NET process for new plants being constructed for additional DIET capacity.
Develop a continuous NET process which requires less space and lower capital and operating costs.
Design and construct NET plant at Bermuda 100
Study the feasibility of converting existing DIET plants to NET.
Develop new products utilizing NET which are subjectively preferred in the marketplace.

Importance to PM-USA

A blend component having more tobacco-like taste with the functional properties of DIET is needed to:
Establish a competitive taste advantage with new low and ultra low tar products
Maintain tobacco taste with products designed to have lower mass burn rates.
Improved processing survivability to provide a better tobacco yield translating into green leaf savings.
NET process planned for Berm100 satisfies need for DIET additional capacity, & future ET expansion.
NET processing results in CO2 emissions that are approx. 50% less than DIET.

Program Benefits

Measurable: Less ET degradation (50% less than DIET), reduced CO2 emissions (50% less than DIET)
Intangible: Improved expanded tobacco taste, subjectively preferred products in the low and ultra-low categories. Expected, but not yet quantifiable: high inclusion levels, reduced mass burn rate products.

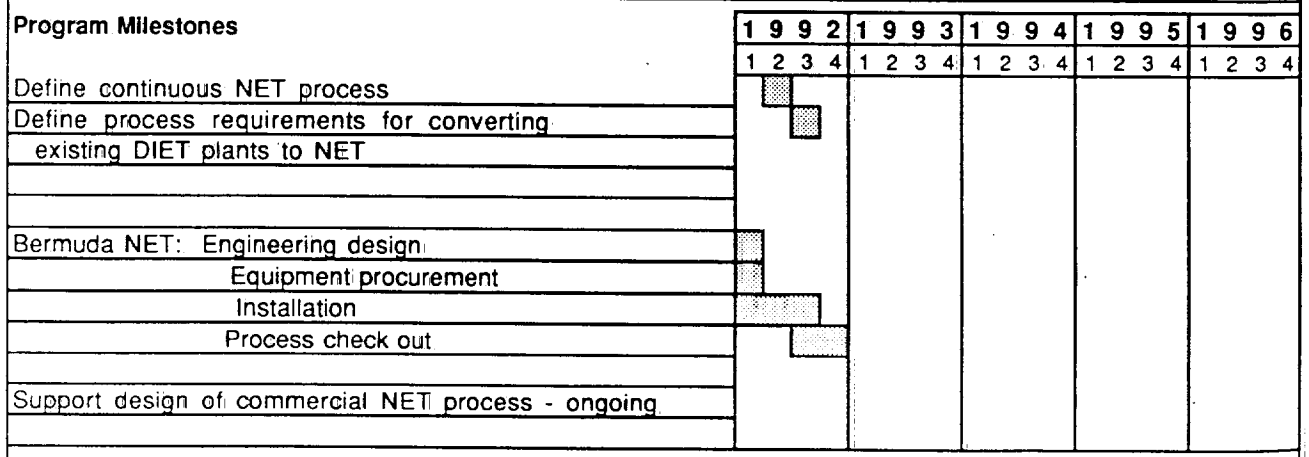
Program Leadership:

Functional Area R&D/Engineering **Department** Tob Fund. Div./ Process Eng. **Program Leader:** E. B. Fischer/ J. Williams

Support Required From	1992 Man-Years	Leadership Dept. (92)
Manufacturing/Processing Plants	2.0	31.0 R&D
		4.0 Eng.

Capital Requirements (92) $ 25 mm **1993-1996** $ _____ **650 Timing** 4q91

Program Milestones



2022950035

11/22/91

Rating: B

1992 - 1996 Five-Year Plan

Program Summary

Program: Improved Stem Capacity Increase

Category: Capacity **Included in 1991-1995 Plan:** No

Start Date: 4th qtr 91 **Completion Date:** 4th qtr 93

Program Description

Design and install an additional steam tunnel to increase improved stem capacity by 5.7 million pounds, from the current 11.1 million to 16.8 million.

Importance to PM-USA

Existing improved stem capacity is insufficient to meet demand on the current two-shift operation at Louisville.

Program Benefits

Maintain two-shift operation at Louisville.

Program Leadership:

Functional Area Engineering **Department** Mfg Eng **Program Leader:** D. Ising

Support Required From	1992 Man-Years	Leadership Dept. (92)
Manufacturing/Louisville	1.0	1.4
Manufacturing Services	0.5	

Capital Requirements (92) $ 2,000,000 **1993-1996** $ _____ **650 Timing** _____

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Complete installation of stem conditioning system																				
Install new stem cutters																				
Replace process equipment including cutter feeder and reheat cylinder																				
Design and install an additional steam tunnel																				

2022950036

12/12/91

Rating: B

1992 - 1996 Five-Year Plan

Program Summary

Program: Retail Promotion Execution

Category: Capacity/Flexibility **Included in 1991-1995 Plan:** No

Start Date: 3rd Qtr. 1991 **Completion Date:** 4th Qtr. 1993

Program Description

Develop logistics for assembly and distribution of product promotions that will minimize the impact on manufacturing and the field sales force. In addition to improving the efficiencies of the existing process we must develop capacity required to meet increased quantities due to the growth in product promotion(promotion volume will increase from approximately 10% of total volume to in excess of 20%) and from centralization of assembly currently done by field sales.

Importance to PM-USA

Enables Operations to support growth of promotions with minimum impact on manufacturing. Due to increasing levels and complexities of product promotions we have strained the distribution and field sales channels. In order to reduce promotions impact on the field sales force and manufacturing resources we must develop and implement new logistics systems and capacity.

Program Benefits

Increasing levels of and complexities of product promotions have strained the distribution and field sales channels. Implementation of improved logistics will enhance responsiveness and improve field sales productivity while minimizing impact of manufacturing.

Program Leadership:

Functional Area Mfg. Services **Department** Comm. Develop. **Program Leader:** Suter

Support Required From	1992 Man-Years	Leadership Dept. (92)
Research and Development		1.5
Engineering		
Manufacturing		
Production Planning		
Purchasing		

Capital Requirements (92) 000,000 **1993-1996 $** 000,000 **650 Timing**

Program Milestones	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Project initiated (3rd Qtr 91)																				
Testing of new logistics for supply of promotion materials																				
and promotions to the field																				
Evaluation of new logistics																				
Development of capacity																				
Program complete																				

2022950037

12/12/91

Rating: C

1992 - 1996 Five-Year Plan

Program Summary

Program: Inventory Control Systems

Category: Capacity/Flexibility **Included in 1991-1995 Plan:** No

Start Date: 3rd Qtr 91 **Completion Date:** 4th Qtr 94

Program Description

Develop and Implement an inventory tracking system that can be utilized at all finished goods storage facilities. This system must be designed to be expandable as storage locations increase and flexible enough to meet future changes in the business.

Importance to PM-USA

Finished goods inventories are presently being stored in six locations in the Richmond area. Each of these facilities currently operates with an inventory control system tailored to that specific location. An inventory control system that can be tailored to meet the needs of all locations will allow for uniform pallet tracing, provide for more reliable inventory rotation, assist personnel in uniformly handling the day-to-day inventory transactions, reducing training time and provide better overall security in inventory storage and shipping operations.

Program Benefits

Increased accuracy of finished goods inventories. Aid in proper rotation of product.
Standardize on one inventory control system for all Richmond finished goods inventories.
Reduce the risk of "hold stock" being shipped.

Program Leadership:

Functional Area Manufacturing Svcs **Department** Finished Goods **Program Leader:** JI McKinney

Support Required From	1992 Man-Years	Leadership Dept. (92)
Information Services		0.1

Capital Requirements (92) $ 00,000 **1993-1996** $ 00,000 **650 Timing**

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Put in place in facilities based upon recommendations of A.T. Kearney distribution study. (Compl. data 4th qtr 91)											■									

2022950038

12/12/91

Rating: C

1992 - 1996 Five-Year Plan

Program Summary

Program: Production Planning Simulation Model

Category: Capacity/Flexibility **Included in 1991-1995 Plan:** Yes

Start Date: 1st qtr 91 **Completion Date:** 1st qtr 92

Program Description

A manufacturing simulation model is under development by the I.S. Management Science Group. This model is called "Cigarette Manufacturing Model," (CMM) and is computer simulation of the Manufacturing Center, Cabarrus, Louisville and Stockton Street facilities. It is designed to quantify the impact on operations of tactical and strategic decisions.

Importance to PM-USA

Currently, the only manner available for evaluating alternative scenarios is to input them into our regular allocation planning models. This is a lengthy process (7-10 days to complete). The output is a complete implementation plan that contains far more detail than required. Multiple scenarios can only be dealt with one at a time. The CMM is designed to quickly simulate manufacturing conditions outlined in a scenario and report in terms of cost, changeovers, overtime risks, etc., which will provide a quicker response.

Program Benefits

Today's quickly changing business environment demands an expedient analysis of management proposals geared toward meeting business objectives. Changes to brand mix and volume will be measured in real terms of costs, overtime potential, machine changeovers, manpower requirements etc.

Program Leadership:

Functional Area Manufacturing Svcs **Department** PP&C **Program Leader:** Bylsma

Support Required From	1992 Man-Years	Leadership Dept. (92)
Information Services	1.0	0.1

Capital Requirements (92) $ 00,000 **1993-1996** $ 00,000 **650 Timing**

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Program verification -3rd qtr 91																				
Initial use of system		■																		

2022950039

1992-1996 FIVE YEAR PLAN MAJOR PROGRAMS

Category: Cost/Productivity

Program Title	Functional Area	Department	Leader	Rating	Ref.
Cig Mfg Machine Maintenance	Engineering	York Mach. Cntr	B. Hassell	A	D-1
MRO Optimization/Alternative Sourcing	Mfg. Services	MRO	Miles	A	D-2
Supply Chain Initiative - Global Description	Mfg. Services	Supply Chain	Gee	A	D-3
Direct Materials Planning, Procurement	Mfg. Services	Supply Chain	Gee	A	D-4
Finished Goods Warehousing and Distributic	Mfg. Services	Supply Chain	Gee	A	D-5
Integrated Product Information	Mfg. Services	Supply Chain	Gee	A	D-6
Integrated Prod/Resource Planning Control	Mfg. Services	Supply Chain	Gee	A	D-7
Finished Goods - A.T. Kearney Study	Mfg. Services	Finished Goods	J. McKinney	A	D-8
Charcoal Brands Productivity	Engineering	Machine Des Eng	G. Atwell	A	D-9
Louisville Productivity	Engineering	Machine Des Eng	W. Turnage	A	D-10
MC Bay 4 Productivity	Engineering	Machine Des Eng	G. Lyon	A	D-11
Specification Consolidation	Technicall Svcs	Spec/Support	L. Watts	A	D-12
New Primary Process	R&D	Process Dev	S. Clark	A	D-13
Synergy Program - Consolidated PM-USA	Mfg. Services	New Programs	Zinski	A	D-14
Purchasing Optimization	Mfg. Services	Purchasing	Latshaw	A	D-15
MC Bay 3 Productivity	Engineering	Machine Des Eng	G. Lyon	A	D-16
MC Bay 5 Productivity	Engineering	Machine Des Eng	G. Lyon	A	D-17
S/S Primary Process Modernization	Engineering	Process Eng	J. Vaughan	B	D-18
Primary Technology	Engineering	Applied Tech	G. Reid	B	D-19
Project GOLD	Engineering	Applied Tech	J. Carboni	B	D-20
Woodpulp Cigarette Paper	Mfg. Services	Chem. Comp	F. Forsmark	B	D-21
Direct Materials Warehouse Mgmt System	Mfg. Services	DM Warehouse	B. Gerrity	B	D-22
S/S Cigarette Manufacturing Modernization	Engineering	Mfg Engineering	C. Hamilton	B	D-23
Label Closure Format Standardization	Mfg. Services	Purchasing	Latshaw	B	D-24
RL Squares	Leaf	Blending	C. Moogalian	B	D-25
Burley Stem Ultilization	Leaf	Blending	L. Jennings	B	D-26

1992-1996 FIVE YEAR PLAN MAJOR PROGRAMS

Category: Cost/Productivity

Program Title	Functional Area	Department	Leader	Rating	Ref.
Green Leaf Threshing Standards	Leaf	Blending	L. Jennings	B	D-27
Tobacco Reclamation - Finished Goods	Engineering	IE/PE/MfgEng	B. Poorbaugh	C	D-28
Tobacco Handling	Engineering	Process Eng	H. Marxen	C	D-29
Tobacco Utilization	Manufacturing	Productivity	C. Horner	C	D-30
Licorice Sourcing Optimization	Mfg. Services	Chem. Comp	F. Forsmark	C	D-31
Label Paper Consolidation	Mfg. Services	Packaging	C. Campbell	C	D-32
Cigarette Paper Consolidation	R&D	Prod Developmt	S. Baldwin	C	D-33
MRO Optimization/Paperless Requisition	Mfg. Services	MRO	Miles	C	D-34
Company Book Inventory/WH Reconciliation	Mfg. Services	Customer Svce	B. Pearce	C	D-35
Charge Back System For Transportation	Mfg. Services	DM Warehouse	B. Gerrity	C	D-36
Electronic Data Interchange with Carrier	Mfg. Services	Transportation	D. Schafer	C	D-37
Two Way EDI with Public Warehouses	Mfg. Services	Transportation	D. Schafer	C	D-38
Printing Press - CHP	Mfg. Services	Col Heights Pckg	B. Roberts	C	D-39
Hogshead Material - Damage	Leaf	Hogshead Repair	H. Oakes	C	D-40
Green Tobacco Packing	Leaf	Purchasing	H. Oakes	C	D-41
Allocation of Tobaccos for Stemming	Leaf	Purchasing	H. Oakes	C	D-42
Trucking Cost Simulation	Leaf	Purchasing	H. Oakes	C	D-43

11/15/91

Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: Cigarette Manufacturing Machine Maintenance

Category: Productivity/Cost **Included In 1991-1995 Plan:** Yes

Start Date: 1st qtr 91 **Completion Date:** 4th qtr 96

Program Description

Establish a uniform, cost effective maintenance process encompassing reactive maintenance, predictive maintenance, machine refurbishment criteria and rebuild/replacement criteria.

Importance to PM-USA

Over two-thirds of maintenance is performed in reaction to either machine breakdown or performance degradation. Major expenditures for machine rebuild or refurbish are based on age of equipment or time since last rebuild, and on machine performance degradation. Machine data are inaccurate and do not provide criteria for the maintenance process, refurbishment and rebuilt.

Program Benefits

Achieve higher machine performance against reduced maintenance costs and ultimately extend the machine rebuild/replacement cycle.

Program Leadership:

Functional Area Engineering **Department** York Mach. Ctr. **Program Leader:** B. Hassell

Support Required From	1992 Man-Years	Leadership Dept. (92)
Manufacturing	4.0	4.0
Employee Relations	6.0	
Information Services	6.0	

Capital Requirements (92) $ TBD **1993-1996** $ TBD **650 Timing**

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Complete maintenance model/conduct pilot at Cabarrus																				
Implement model at all factories																				
(detailed milestones available)																				
Establish refurbish model process, conduct pilot																				
Conclude refurbish organizational issues																				
(local vs. remote, role of York, labor source)																				
Establish performance tracking system for rebuild equip																				

2022950042

12/12/91

Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: Alternative Sourcing of Spare Parts

Category: Productivity/Cost **Included in 1991-1995 Plan:** Yes

Start Date: 1st qtr 92 **Completion Date:** 4th qtr 93

Program Description

The majority of spare parts required to support PM USA cigarette production machinery are sourced from overseas Original Equipment Manufacturers. The cost of these parts have generally escalated to the point considerable cost savings are anticipated by increasing the participation of domestic sources. This project will develop inventory and financial impact analysis to initiate an ongoing process of identifying parts that can be reasonably considered reproducible to the same specs/performance by alternate domestic sources at lower cost.

Importance to PM-USA

A project feasibility study by Industrial Engineering yielded potential cumulative five year net savings of over $11 million in spare parts costs.

This calculation does not include any benefits of reduced lead-times that may impact inventory levels/turnover or the effect of foreign currency translation of parts costs.

The program will include an analysis of PM-USA cost per part to PM-Europe.

Program Benefits

Financial returns as projected by the project feasibility study are expected to be significant. In addition, reduced lead times and dependence on OEM suppliers is a further benefit.

Program Leadership:

Functional Area Mfg Services **Department** MRO **Program Leader:** Miles

Support Required From	1992 Man-Years	Leadership Dept. (92)
MRO Purchasing	0.5	1.5
Manufacturing Maintenance - all plants	1.5	
Engineering	Negligible	
Finance	Negligible	
IS		

Capital Requirements (92) $ 00,000 **1993-1996 $** 00,000 **650 Timing**

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Resource commitment confirmed (4th qtr 91)																				
Industrial Engineering study review/further developed																				
Develop reverse engineering procedures and resource commitment (internal)																				
Develop alternative sourced part testing procedure and resources (internal)																				
Initial domestic suppliers identified																				
Domestic suppliers provide spare parts																				
Initiate ongoing effort																				

2022950043

12/12/91

Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: Supply Chain Initiative - Global Description

Category: Productivity/Quality **Included In 1991-1995 Plan:** Yes

Start Date: 3rd qtr 90 **Completion Date:** 2nd qtr 93

Program Description

Re-engineer and optimize the Business/Information Systems utilized throughout the PM-USA Supply Chain, including Master Production/Resource Planning and Control; Direct Materials Planning, Procurement and Logistics, Integrated Production Information (includes Bill of Material, Product Specifications and Material Specifications) and Finished Goods Warehousing and Distribution.

Importance to PM-USA

Current systems are increasingly reactive, extremely tactical (often within lead times of critical support resources), manpower intensive, highly individual dependent, fragmented, and increasingly inflexible. Fundamental, global changes to existing processes and supporting systems must be made to ensure PM-USA's continued success and industry leadership in the future.

Program Benefits

Increased productivity and security of production and delivery capabilities; cost efficient flexibility and responsiveness to changing requirements; improve resource planning capabilities; improved product quality; increased total profits; and facilitate continuous improvements in quality and technology.

Program Leadership:

Functional Area Operations **Department** Mfg Svcs **Program Leader:** Ed Gee

Support Required From	1992 Man-Years	Leadership Dept. (92)
Information Services	87.0	19.0
Operations	19.8	
Human Resources	0.2	
Finance	0.2	
Other	0.3	

Capital Requirements (92) $ _____ **1993-1996 $** _____ **650 Timing** _____

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Integrated Prod/Resource Planning System implemented																				
Integrated Product Info Systems implemented																				
Direct Materials Procurement, Planning and Logistics Systems implemented																				
Finished Goods Warehousing and Distribution																				

(See also individual program summaries)

2022950044

12/9/91 Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: Direct Materials Planning, Procurement, and Logistics (Supply Chain)

Category: Productivity/Quality **Included in 1991-1995 Plan:** Yes

Start Date: 3rd Qtr. 1990 **Completion Date:** 4th Qtr. 1992

Program Description

Design and implement optimized, integrated business/information systems throughout the direct material chain, with major sub-segments being Supplier Alliances, Procurement Strategies, Inventory Control, Material Distribution, and Material Planning.

Importance to PM-USA

1. Improve productivity in terms of total materials-related costs (dollars and resources).
2. Increase PMUSA flexibility responsiveness, and ability to further segment product line
3. Lessen potential limitations of vendor and manufacturing capacity constraints.
4. Enable acceleration of product quality improvements.
5. Enable acceleration of development of new materials technology.

Program Benefits

Implementation of this program is expected to yield significant cost avoidance opportunities in addition to other benefits as outlined above.

Program Leadership:

Functional Area Mfg Services **Department** Supply Chain **Program Leader:** E. Gee

Support Required Form	1992 Man-Years	Leadership Dept. (92)
Information Services	14.0	6.0
Operations, Human Resources, Finance	9.0	

Capital Requirements (92) $ _____ **1993-1996 $** _____ **650 Timing** n/a

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
"To Be" material, Plng Sys developed/selected																				
Inventory Control System implementation																				
Supply on Demand introduced to M/C																				
Fast Flow delivery roll-out complete																				
Optimal buying strategies benefits realized																				

2022950045

12/12/91

Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: Finished Goods Warehousing and Distribution (Supply Chain)

Category: Productivity/Quality **Included in 1991-1995 Plan:** Yes

Start Date: 3rd Qtr 1992 **Completion Date:** 2nd Qtr 1993

Program Description

Optimize finished goods warehousing and distribution business systems (Resources currently undefined, pending re-determination of scope and work plans, which are contingent upon results of existing warehousing/distribution stragegy initiative with A. T. Kearney.)

Importance to PM-USA

1. Productivity and security of warehousing and distribution resources and business systems
2. Product quality implications
3. Productivity and security of entire supply chain
4. Potential area of competitive advantage

Program Benefits

Will support the domestic and export shipping requirements of PM-USA Richmond in the most cost effective manner. Provides adequate storage and handling capabilities for all domestic and export product. Provides controls needed for inventory accounting, product tracking and quality monitoring.

Program Leadership:

Functional Area Mfg Services **Department** Supply Chain **Program Leader:** Gee

Support Required From	1992 Man-Years	Leadership Dept. (92)
Information Services		0.0
Operations, Human Resources, Finance, Sales Forecasting		
PMI		

Capital Requirements (92) $ _____ **1993-1996 $** _____ **650 Timing** n/a

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Completion of A. T. Kearney study																				
Program initiated			■																	
Program completed						■														

2022950046

12/12/91

Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: Integrated Product Information (Supply Chain)

Category: Productivity/Quality **Included in 1991-1995 Plan:** Yes

Start Date: 3rd qtr 1990 **Completion Date:** 2nd qtr 1993

Program Description

Develop a single, consistent, accurate, complete, and optimized business/information system for production related information (bill of material, product specifications, material specifications, quality standards and tests, and good manufacturing practices) that supports and anticipates the requirements of the business.

Importance to PM-USA

Existing product technical information is fragmented, incomplete, inconsistent, inaccurate, and structurally limited, with massive amounts of human intervention in maintenance and use required. An integrated and optimized product information base is an essential prerequisite to improvements in production/resource planning and control, and materials planning, procurement, and logistics.

Program Benefits

Development of an automated, integrated system will reduce errors, ensure consistency, completeness and accuracy and increase the labor force productivity. This system is a required prerequisite to implementation of the complete business system optimization program.

Program Leadership:

Functional Area Mfg Services **Department** Supply Chain **Program Leader:** Gee

Support Required From	1992 Man-Years	Leadership Dept. (92)
Information Services	14.0	3.0
Operations, Finance	5.0	

Capital Requirements (92) $ 00,000 **1993-1996** $ 00,000 **650 Timing** n/a

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Database definition complete - Dec '91																				
"To Be" System developed																				
"To Be" data loaded																				
"To Be" System operational																				
Project completed																				

2022950047

12/12/91

Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: Integrated Production/Resource Planning Control (Supply Chain)

Category: Productivity/Quality **Included in 1991-1995 Plan:** Yes

Start Date: 3rd Qtr. 1990 **Completion Date:** 1st Qtr. 1993

Program Description

Design and implement optimized, integrated business/information systems for production/resource planning and control, with major sub-segments being demand & distribution planning, finite scheduling, factory scheduling & control, and master production planning and scheduling.

Importance to PM-USA

Current systems are increasingly reactive, extremely tactical (often within lead times of critical support resources), manpower intensive, highly individual dependent, and increasingly inflexible. As critical enablers are developed, investment and change in these systems are required to drive improvements in: 1) finished goods logistics, 2) productivity and security of product delivery capabilities, 3) productivity and security of critical manufacturing support capabilities, 4) flexibility and responsiveness, 5) resource planning (e.g. plant, equipment, manpower

Program Benefits

Current systems and processes are inadequate, labor intensive and fragile.
Implementation of this system will provide a competitive advantage in the market place and improve information flows and results in virtually every area of Operations.

Program Leadership:

Functional Area Mfg Services **Department** Supply Chain **Program Leader:** Gee

Support Required From	1992 Man-Years	Leadership Dept. (92)
Information Services (S,D&D)	55.0	8.0
Information Services (other)	4.0	
Operations, Human Resources, Finance		
Sales Forecasting, PMI	7.3	

Capital Requirements (92) $ _____ **1993-1996 $** _____ **650 Timing** n/a

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Finite scheduling system activated							■													
Demand Planning "To Be" systems implementation						■														
Factory scheduling "To Be" systems implementation				■																

2022950048

12/12/91

Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: Finished Goods Warehousing and Shipping Study - Richmond

Category: Cost/Productivity **Included in 1991-1995 Plan:** No

Start Date: 1st Qtr 91 **Completion Date:** 4th Qtr 91

Program Description

A. T. Kearney is currently conducting a study to determine the most economical method of handling receipt, storage and shipment of domestic and export product for Richmond factories. This study will take into consideration present operations as well as what will be required to handle distribution of product in the future.

Importance to PM-USA

Systems that currently handle domestic and export product were designed and constructed in the 1970's. Growth in export and domestic volume, as well as changes in the way we do business today (increased SKU's & inventories, partial pallet shipping) necessitate building of added storage and handling facilities or adopting other methods of handling product in satellite warehouses.

Program Benefits

Supports the domestic and export shipping requirements of PM-USA-Richmond in the most cost effective manner. Provides adequate storage and handling capabilities for all domestic and export product from time of receipt to time of shipment. Provides control needed for inventory accounting, tracking of product movement and rotation of finished product from Rich factories to customer. Provide flexibility if business changes.

Program Leadership:

Functional Area Mfg. Services **Department** Finished Gds **Program Leader:** JI McKinney

Support Required From	1992 Man-Years	Leadership Dept. (92)
A. T. Kearney		0.1

Capital Requirements (92) $ TBD **1993-1996 $** TBD **650 Timing**

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Completion of study (4th Qtr 1991)																				
Implementation based on recommendation and management approval of recommendation																				

2022950049

11/15/91

Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: Charcoal Brands Equipment Development

Category: Productivity/Cost **Included in 1991-1995 Plan:** Partly

Start Date: Ongoing **Completion Date:** Ongoing

Program Description

Qualify high speed filter delivery and cigarette making equipnt for Parliament.
Quality high speed filter making and delivery, and cigarette making equipment for lark.
Qualify and install the dual hopper max concept at Cabarrus for PM Superlights/Merit Japan.
Evaluate centralized filtermaking facility versus current decentralized operations.

Importance to PM-USA

Charcoal filtered production is projected to increase dramatically, from 38.5 billion in 1991 (11% of total PM-USA production) to 65 billion in 1996 (16% of total PM-USA production). This trend is expected to continue beyond 1996. Currently, charcoal brands are produced on slow speed cigarette making and filter making equipment. Manufacturing costs compare unfavorably to white filter brands, due to low speed, high manning complement and high wastages. Space requirements for charcoal filter making is 3 to 5 times that of Marlboro.

Program Benefits

Generate capacity/space to meet projected requirements over the plan period.
Reduce cigarette manufacturing costs to the level of regular filtered brands. A specific target is set for Parliament high speed makers 8,000 cpm, 75% utilization, maker rejects less than 4% with a cigarette (quality) defect rate of less than 1%.

Program Leadership:

Functional Area Engineering **Department** Mach. Des. Eng. **Program Leader:** G. Atwell

Support Required From	1992 Man-Years	Leadership Dept. (92)
Manufacturing	6.0	11.0
Manufacturing Services	2.5	
Information Services	2.0	

Capital Requirements (92) $ TBD **1993-1996** $ TBD **650 Timing**

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Parliament high speed maker/tipper evaluation																				
Parliament - Pegasus 2000 filter delivery eval.																				
Parliament - Machinery Recommendation																				
Lark - High speed combiner evaluation																				
Lark - Pegasus 2000 filter delivery evall																				
Lark - High speed maker/tipper evaluation																				
Lark - Machinery recommendation																				
PM Superlights/Merit Japan dual hopper max																				
Centralized vs. Decentralized filtermaking evall																				

2022950050

11/22/91

Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: Louisville Productivity

Category: Cost/Productivity **Included in 1991-1995 Plan:** Yes

Start Date: 1st qtr 91 **Completion Date:** 4th qtr 95

Program Description

Install comflex cigarette handling systems to link a Mark9Y maker with integrated productivity improvement module (PIM), to each packer. Add state-of-the-art data communications equipment to provide operator assist. Install one-to-one case packers on each cigarette packer. Install cigarette and pack quality inspection systems. Install a central maker byproducts collection system to improve housekeeping.

Importance to PM-USA

Reduce manufacturing cost through manning complement reductions. Achieve improvement in production flexibility and factory utilization through machinery enhancement and product handling automation. Achieve improvement in product quality through machinery enhancement and on-line quality defect detection.

Program Benefits

Increase factory utilization by 2.5%. Eliminate 201 positions. Reduce costs by $14.6 million (1995). (Overall ROI: 16.6%) Reduce critical defect levels to: Cigarette - 1.07, Soft Pack - 0.52, and Hard Park - 0.84.

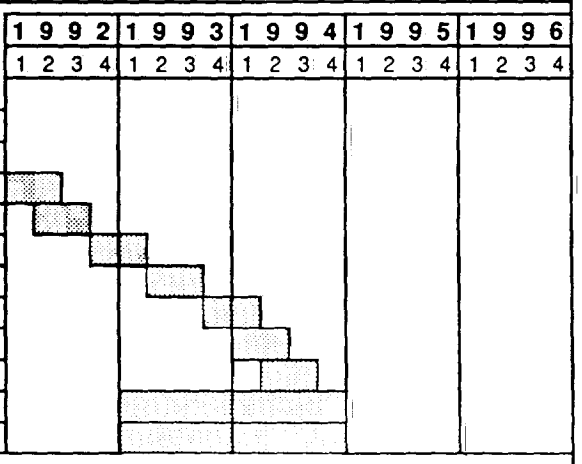
Program Leadership:

Functional Area Engineering **Department** Mach Des Eng **Program Leader:** W. Turnage

Support Required From	1992 Man-Years	Leadership Dept. (92)
Manufacturing	5.0	10.0
Information Services	2.0	
Manufacturing Services	1.0	

Capital Requirements (92) $ 18,700,000 **1993-1996** $ 17,100,000 **650 Timing**

Program Milestones



2022950051

11/22/91

Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: M/C Bay 4 Productivity

Category: Productivity/Cost **Included In 1991-1995 Plan:** Yes

Start Date: 1st qtr 92 **Completion Date:** 4th qtr 94

Program Description

Implement modernized end-of-line case packing and overwrapping machinery.
Rebuild and upgrade Bay 4 makers and packers to achieve optimal modules speed match.

Importance to PM-USA

Provide end-of-line flexibility to meet export requirement.

Program Benefits

End-of-line flexibility, reduce cost and improved flexibility.

Program Leadership:

Functional Area Engineering **Department** Mach Des Eng **Program Leader:** G. Lyon

Support Required From	1992 Man-Years	Leadership Dept. (92)

* End of line equipment

Capital Requirements (92) $ 13,800,000* **1993-1996 $** _____ **650 Timing** _____

Program Milestones	1992 1 2 3 4	1993 1 2 3 4	1994 1 2 3 4	1995 1 2 3 4	1996 1 2 3 4
Case packing and overwrapper modernization					
Machine rebuild and upgrade:					
Protos Makers					
G.D Packers					

2022950052

12/3/91 Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: Specification Consolidation

Category: Cost/Productivity **Included in 1991-1995 Plan:** Yes

Start Date: July, 1990 **Completion Date:** Ongoing

Program Description

Identify specification consolidation opportunities which could favorably impact cost/productivity for Full Margin and Price Value products.
Consolidations may or may not be transparent to the consumer.
Evaluate the impact of the change.
Implement approved product changes.

Importance to PM-USA

Productivity Improvement - Yield
Productivity Improvement - Machine Utilization
Productivity Improvement - Waste Reduction
Reduce Direct Material Cost
Quality Improvement through reduced changeovers

Program Benefits

Productivity Improvement
Reduced Operating Cost

Program Leadership:

Functional Area Technical Services **Department** Specifications and Support **Program Leader:** L. Watts

Support Required From	1992 Man-Years	Leadership Dept. (92)
Factories	1.0	0.5
R&D/Leaf	1.0	
Operations Services/Flavor Operations	2.0	
Purchasing	0.5	
Finance	0.5	

Capital Requirements (92) $ 0 **1993-1996** $ 0 **650 Timing** -

Program Milestones	1992 1 2 3 4	1993 1 2 3 4	1994 1 2 3 4	1995 1 2 3 4	1996 1 2 3 4
1992 Project Implementation (Partial List)					
o B&H Foil Blank Elimination					
o Alcohol Reduction in BTC					
o 5 mg Wt. Reduction - Full Margin Brands					
o ET Inclusion Rate Increase					
1992-1993 Evaluate the Following:					
o Plasticizer Reduction (8% to 7% to 6%)					
o Carbon Loading/Consolidation					
o Tropical Filler Elimination					
1994-1996 Evaluate the Following:					
o Woodpulp vs. Flax Cigarette Paper					
o Consolidate adhesives and adhesives suppliers					

2022950053

12/12/91

Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: New Primary Process

Category: Cost/Productivity **Included in 1991-1995 Plan:** no

Start Date: 1st qtr 91 **Completion Date:** 4th qtr 94

Program Description

Develop a new primary process based upon individual processing of tobacco components.
Objectives are flexibility improvement, conversion cost reduction, reduced emissions and opening new avenues for product development.
Qualify process for existing brands and develop new brands based upon technology.

Importance to PM-USA

Primaries are designed for high volume brands, yet increasing requirements are for small volume brands. Price/value segment is increasing, but yields less profit margin.
New Primary process is required to reduce cost. New Primary process needed to minimize emissions through product reformulation and process modification. New process needed to provide more tools for product development.

Program Benefits

Cigarette weight reduction of up to 50 mg
Reduced primary conversion cost ($0.28/1000 based on S/S brand mix)
Expected, but not yet quantifiable: reduced VOC's, improved process yield
Intangible: greater primary flexibility for new products

Program Leadership:

Functional Area R&D **Department** Process Dev. **Program Leader:** T. C. Holland

Support Required From
Engineering

1992 Man-Years

Leadership Dept. (92)
19.0

Capital Requirements (92) $ $5.075 mm **1993-1996** $ TBD **650 Timing**

Program Milestones	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Establish product potential																				
Develop process																				
Test concept																				
For detailed milestones, see separate sheet																				

12/12/91

Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: Synergy Program (Purchasing - MRO - DIstribution)

Category: Productivity / Cost **Included In 1991-1995 Plan:** Yes

Start Date: 1st Qtr 1988 **Completion Date:** 4th Qtr 1996

Program Description

Consolidate purchasing power and coordinate a centralized program, particularly in high volume and high dollar situations creating a balance in company purchases that does not currently exist. Greater uniformity and consistency, increased synergies and other benefits will be realized by further development of this program and utilizing the modern, professional purchasing techniques this program offers.

Importance to PM-USA

- To increase uniformity throughout the PM organizations
- To improve purchasing methods and practices
- To lower the overall costs, and at the same time, increase total value through purchasing synergies.
- To better utilize purchasing personnel
- To increase the overall quality of goods and services received
- To improve financial controls

Program Benefits

Financial benefits are expected but are not quanitifed and extend not only to PM-USA but to PM International and to corporate profitability including KGF, Miller and other operating companies. Quality improvements are also planned

Program Leadership:

Functional Area Mfg Services **Department** New Programs **Program Leader:** Zinski

Support Required From	1992 Man-Years	Leadership Dept. (92)
MRO - Richmond, Lvl.,Cabarrus	0.6	2.5
R&D		
QA		
Tech Services		
Mfg Services	2.3	

Capital Requirements (92) $ none **1993-1996 $** none **650 Timing** none

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Identify and propose resources for Program support																				
Increase involvement with KGF synergy organization																				
Increase involvement with PMI																				
Centralize MRO operations																				
Consolidate Purchasing departments																				

2022950055

12/12/91

Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: Purchasing Optimization

Category: Cost/Productivity **Included in 1991-1995 Plan:** Yes

Start Date: 1 Qtr 1983 **Completion Date:** Ongoing

Program Description

PM-USA Purchasing is pursuing an agressive program that will impact multiple functional areas of the organization. Programs are in place to substantially reduce the number of vendors (since 1980 total reduction from 525 to 167), further reduce cost of goods puchased (below PPI adjusted for Energy), improve supplier quality to above the 99% acceptance level, evaluate single source suppliers, further implement the use of economic order quantites, tandem runs, fast flow and Just In Time deliveries.

Importance to PM-USA

Direct Materials Purchasing is one of the Company's single largest cost centers and the control of expenditures for supplies and materials is a critical element in our overall cost/productivity effort.

This program is closely linked to and is supportive of the Supply Chain initiative.

Program Benefits

Purchasing optimization programs are projected to result in purchase costs for Direct Materials to remain at least 1% below the PPI adjusted for energy.
Additional quality improvements are expected as a result of the supplier alliances.

Program Leadership:

Functional Area Manufacturing Svcs **Department** Purchasing **Program Leader:** Latshaw

Support Required From	1992 Man-Years	Leadership Dept. (92)
		22.0

Capital Requirements (92) $ None **1993-1996 $** None **650 Timing** n/a

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Accomplish 1% savings after PPI adjustment																				
Reduce number of suppliers from previous year levels																				
Evaluate and implement paperless ordering systems																				
Further refine supplier cost modeling applications																				
Attain supplier materials acceptance level > 99%																				
Evaluate and test sole supplier concept																				
Increase inventory turn levels from previous year																				

202295056

11/22/91

Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: M/C Bay 3 Productivity

Category: Productivity/Cost **Included in 1991-1995 Plan:** No

Start Date: 1st qtr 92 **Completion Date:** 3rd qtr 95

Program Description

Install 6, G.D X2 NV box packers to balance 83mm export production. Evaluate replacement of the Mark 9 makers with Protos for linkup to the G.D X2 NV's. (Protos makers from Cabarrus, replaced with new Protos 100). With Parliament 100, install 10 to 12 high speed Parliament modules. (Refer to Charcoal Brands Production Improvements). Without Parliament 100, install high speed modules with individual case packers for module flexibility to produce high volume branded generics.

Importance to PM-USA

Achieve the strategic manufacturing plan brand allocation in the most economical and operationally viable manner.

Program Benefits

Reduce the manufacturing costs of Parliament to the level of regular filtered brands. Provide the manufacturing capacity needs of Parliament. If Parliament not at MC, benefits are to reduce the operational difficulties at the MC, associated with varied equipment mix and to provide adequate flexibility to support the plant's changing brand mix.

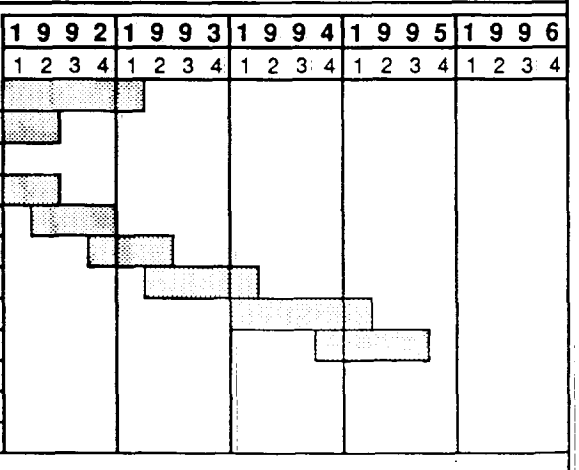
Program Leadership:

Functional Area Engineering **Department** Mach Des. Eng **Program Leader:** G. Lyon

Support Required From	1992 Man-Years	Leadership Dept. (92)

Capital Requirements (92) $ TBD **1993-1996** $ TBD **650 Timing**

Program Milestones



2022950057

11/22/91

Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: M/C Bay 5 Productivity

Category: Productivity/Cost **Included in 1991-1995 Plan:** Partly

Start Date: 1st qtr 92 **Completion Date:** 4th qtr 96

Program Description

Install high speed Lark modules and high speed filter delivery system - Pegasus.
(Refer to Charcoal Brands Production Improvements.)

Importance to PM-USA

Achieve the PM-USA strategic manufacturing brand allocation in the most economical and operationally viable manner.

Program Benefits

Reduce the manufacturing costs of charcoal filtered cigarettes to the level of regular filtered brands. Provide the manufacturing capacity needs of Lark.

Program Leadership:

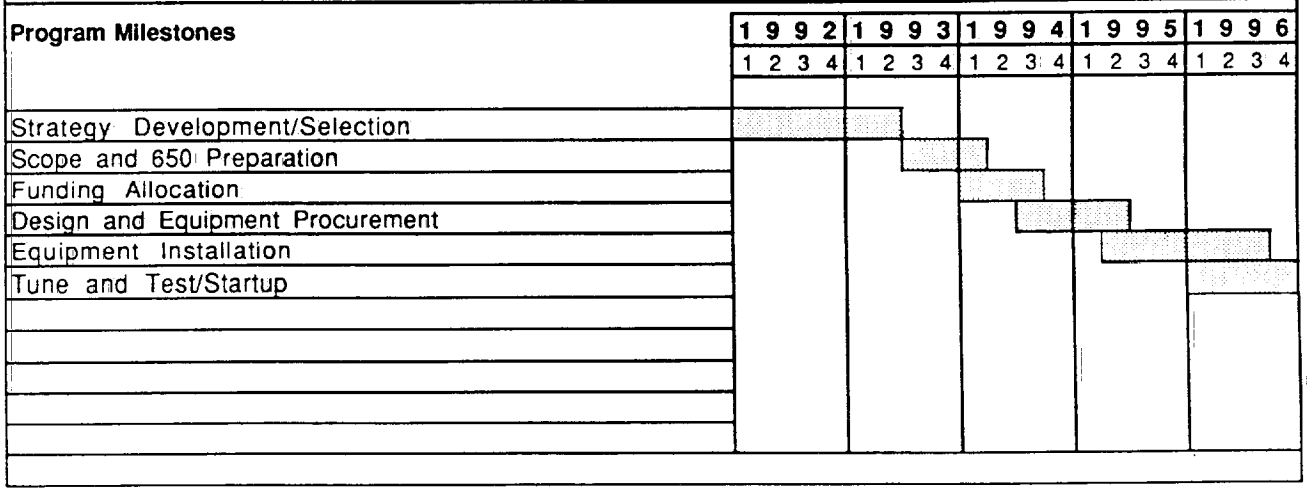
Functional Area Engineering **Department** Mach Des Eng **Program Leader:** G. Lyon

Support Required From **1992 Man-Years** **Leadership Dept. (92)**

Manufacturing

Capital Requirements (92) $ TBD **1993-1996 $** TBD **650 Timing**

Program Milestones



2022950058

11/22/91

Rating: B

1992 - 1996 Five-Year Plan

Program Summary

Program: Stockton Street Primary Processing Modernization

Category: Productivity/Cost **Included in 1991-1995 Plan:** Partly

Start Date: 3rd qtr 91 **Completion Date:** 4th qtr 95

Program Description

Upgrade process controls and production reporting systems. Replace obsolete process equipment such as Legg cutters and process controls. Upgrade the Burley Spray preparation and application systems. Design and install improved cut filler storage and delivery equipment. Upgrade the ripper system to optimize the combination of seive size, paper count, and yield.

Importance to PM-USA

Improve CF quality as measured by moisture and blend consistency, and reduced product degradation. Improve flexibility to produce small brands by upgrading the cut filler storage and delivery area and improving scheduling techniques. Reduce costs through increased process yields. Identify and implement opportunities for productivity increase and improved safety through reduction in manual handling of tobacco containers. Replace obsolete equipment as needed to insure ongoing, reliable operation of the primary.

Program Benefits

Increase process yields by approximately 1%. Reduce 35 mesh and pan sieve fractions in the cigarette by 1.3% (from 15.3 to 14%). Increase drying efficiency from 93.5 to 95%. Improve flexibility for multiple brand operation. Labor savings through reduced manual operations. Safety incident rate reductions through improved ergonomics.

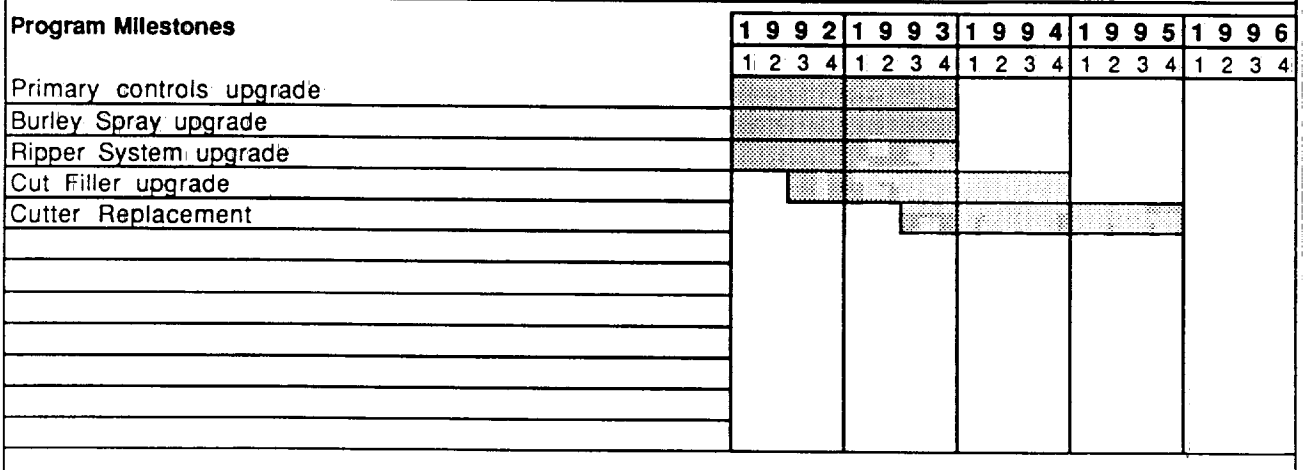
Program Leadership:

Functional Area Engineering **Department** Process Eng. **Program Leader:** J. Vaughan

Support Required From	1992 Man-Years	Leadership Dept. (92)
Manufacturing	2.0	7.0
Information Services	0.5	

Capital Requirements (92) $ 3,000,000 **1993-1996** $ 14,400,000 **650 Timing**

Program Milestones



2022950059

11/22/91

Rating: B

1992 - 1996 Five-Year Plan

Program Summary

Program: Primary Technology

Category: Cost/Productivity **Included in 1991-1995 Plan:** Yes

Start Date: Began in 1990 **Completion Date:** 1992/ongoing

Program Description

Evaluate latest technologies in Primary Processing. Specific projects are Automated Hogshead Stripping and Tracking, Foreign Matter Removal, Pneumatic Tobacco Feeding, Flavor Application and KABAT.

Importance to PM-USA

Program Benefits

Reduce processing costs of existing Primaries. Improve cut filler quality. Improve flexibility.

Program Leadership:

Functional Area Engineering **Department** Applied Tech **Program Leader:** G. Reid

Support Required From	1992 Man-Years	Leadership Dept. (92)
Manufacturing	5.0	2.7
Manufacturing Services	2.0	

Capital Requirements (92) $ 2,100,000 **1993-1996 $** _____ **650 Timing** _____

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Automatic hogshead stripping/tracking			■																	
Foreign matter removal			■																	
Pneumatic tobacco feed	■																			
Flavor application			■																	
KABAT			■																	

2022950060

12/20/91

Rating: B

1992 - 1996 Five-Year Plan

Program Summary

Program: Project Gold

Category: Cost/Productivity **Included in 1991-1995 Plan:** Yes

Start Date: 1st qtr 91 **Completion Date:** 4th qtr 95

Program Description

Eliminate the use of liquid adhesives for packaging materials in the make/pack process, through the use of pre-applied heatseal adhesive.

Importance to PM-USA

Maintain competitive cost structure.

Program Benefits

Improve packing machine efficiencies on soft packer, FTB packer and boxer (preliminary results indicate 3-5% efficiency increase in cut label soft pack).
Eliminate wet glue related quality packaging defects.

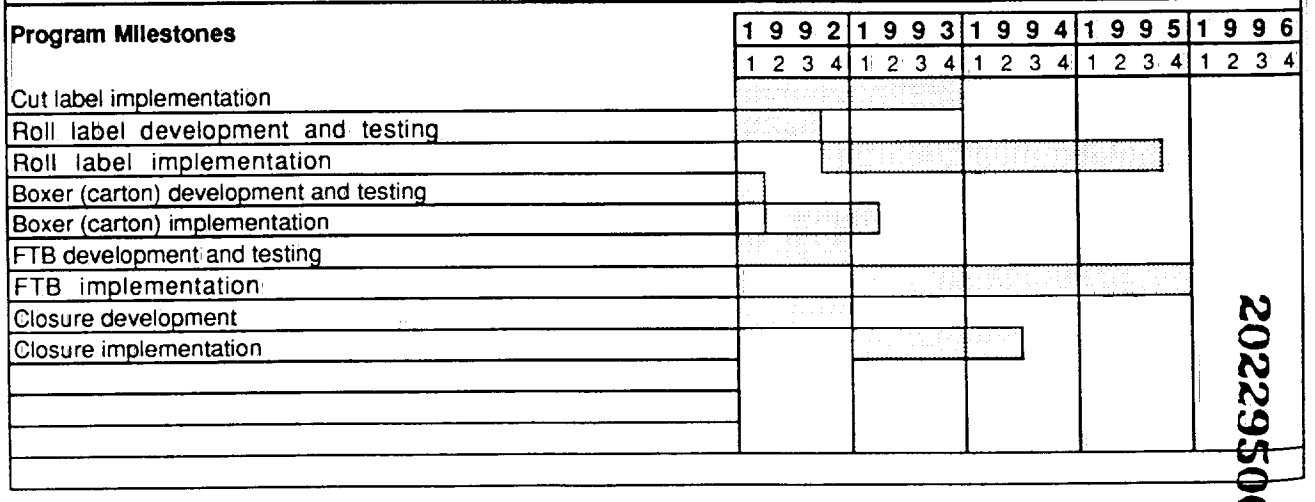
Program Leadership:

Functional Area Engineering **Department** Applied Tech **Program Leader:** J. Carbonil

Support Required From	1992 Man-Years	Leadership Dept. (92)
Engineering	4.0	
Manufacturing Services		
Manufacturing		

Capital Requirements (92) $ 200,000 **1993-1996** $ _____ **650 Timing** _____

Program Milestones



2022950061

12/12/91

Rating: B

1992 - 1996 Five-Year Plan

Program Summary

Program: Woodpulp Cigarette Paper

Category: Cost/Productivity **Included in 1991-1995 Plan:** No

Start Date: 1st qtr 92 **Completion Date:** 2nd qtr 93

Program Description

Evaluate feasibility of converting all cigarette papers from flax to woodpulp in view of major industry shifts in this direction. Institute the conversion if warranted.

Establish appropriate specifications for woodpulp paper and carry out testing required to qualify this paper for use on full margin brands.

Importance to PM-USA

RJR's conversion to woodpulp papers results in competitive cost advantage to them.
Flax - woodpulp paper price gap may widen due to lowered flax volumes.

Use of this paper could produce savings of substantial magnitude.

Program Benefits

Potential $18 - 30mm annual cost savings.

Program Leadership:

Functional Area Manufacturing Svcs **Department** Chem,Comp **Program Leader:** Forsmark

Support Required From	1992 Man-Years	Leadership Dept. (92)
R&D	4.0	0.1
Technical Services		

Capital Requirements (92) $ TBD **1993-1996 $** _____ **650 Timing** n/a

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Form cross functional team to evaluate	■																			
Complete analysis; present recommendation			■																	
Begin implementation, if feasible / do product testing				■																
Complete implementation						■														

2022950062

12/9/91

Rating: B

1992 - 1996 Five-Year Plan

Program Summary

Program: Direct Materials Warehouse Space Management System

Category: Productivity **Included in 1991-1995 Plan:** No

Start Date: 1st Qtr 1992 **Completion Date:** 1st Qtr 1994

Program Description

Develop bar code to be used on all direct materials. Require all major suppliers to use bar codes. Bar codes for smaller suppliers and transfers of partial pallets between PM locations will be bar coded by receiving location. Develop electronic data interchange network to have information pertaining to each pallet of material. Bar code on pallet will act as a pointer to data. Develop programs to use data collected by bar code system in existing DM system. Replace multiple data bases with one. Develop locator system.

Importance to PM-USA

Increased inventory accuracy and visibility is needed to enable Purchasing to reduce amount of material purchased to the lowest possible economical point. Increase space utilization so that as the number of stock keeping units increases, storage will be possible without needed additional warehouse space. Increased pallets per labor hour will reduce the cost to handle material.

Program Benefits

Increase Material Warehouse's pallets per labor hour by 10% over five year period. Reduce errors in receiving and shipping of materials. Store all warning notice material in main warehouse instead of off-site storage location. Increase amount of materials that can be stored in the two existing warehouses.

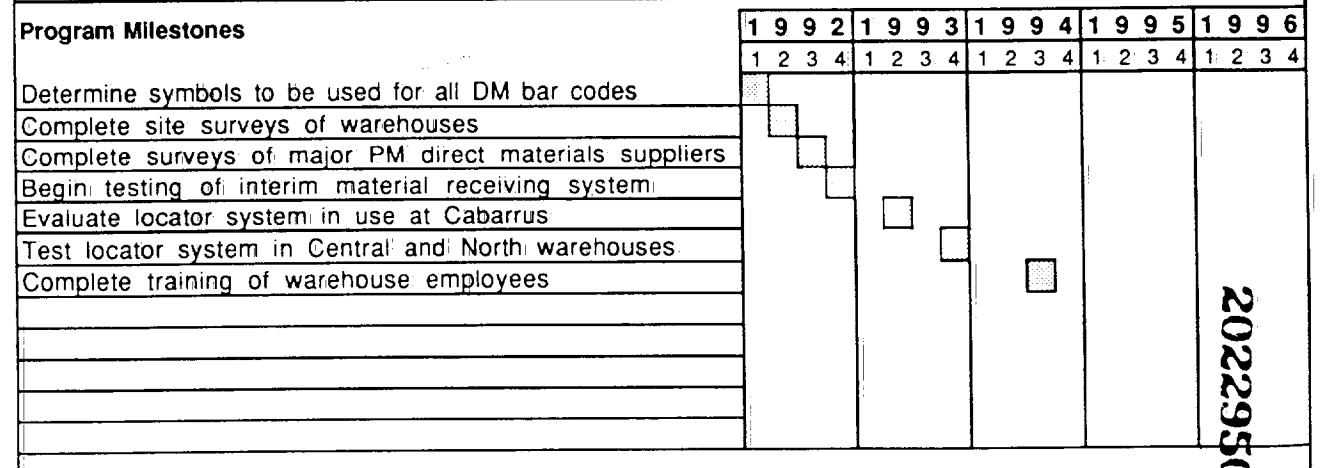
Program Leadership:

Functional Area Manufacturing Svcs **Department** DM Warehouse **Program Leader:** B. Gerrity

Support Required From	1992 Man-Years	Leadership Dept. (92)
Information Services		0.1
Manufacturing Center		
Stockton Street Materials		
Supply Chain		

Capital Requirements (92) $ 300,000 **1993-1996** $ _____ **650 Timing** _____

Program Milestones



2022950063

11/22/91

Rating: B

1992 - 1996 Five-Year Plan

Program Summary

Program: Stockton Street Cigarette Manufacturing Modernization

Category: Productivity/Cost **Included in 1991-1995 Plan:** _____

Start Date: 1st qtr 91 **Completion Date:** 4th qtr 96

Program Description

Replace/Upgrade slow speed manufacturing equipment and implement design enhancements on remaining old generation equipment (6's, English Ovals). Install additional overwrapping equipment to support export tear tape requirements. Install a central stem and dust collection system and a central vacuum system. Complete plan development for a Parliament technical upgrade at Stockton Street to improve brand costs and quality (high speed making, automatic filter delivery, and improved cig & carton handling). Complete plans for auto filter handling, cigs & case packing assuming Parl leaves.

Importance to PM-USA

S/S's mission is to produce low volume brands. Future plant allocations indicate increasing brand mix complexity including smaller brand runs than being experienced today. This will magnify the problems associated with manual product handling (filter, cigarette, and carton), quick machinery changeover, and manufacturing floor congestion. To achieve the plant's objectives for utilization, quality, and safety, Stockton Street will require a higher level of automation in cigarette manufacturing.

Program Benefits

Reduce mfg cost through manning complement reductions. Achieve improvement in production flexibility, factory utilization, and product quality and safety through machinery upgrade and product handling automation.

Program Leadership:

Functional Area Engineering **Department** Mfg Eng **Program Leader:** C. Hamilton

Support Required From	1992 Man-Years	Leadership Dept. (92)
Manufacturing	1.0	4.0
Information Services	0.5	

* Remaining MK-9's

Capital Requirements (92) $ 112,000* **1993-1996** $ TBD **650 Timing** _____

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Replace 15 Mark 8's with 9 Mark 9's																				
Replace/Upgrade Focke Packers and 2 HLP's with G.D X2's																				
Sixes and English Ovals Packing Upgrade																				
Central Vacuum System																				
Central Stem and Dust System																				
Parliament Tech. Upgrade Plan Dev and Implem.																				
Filter, Cig, Case Handling Automation Plan, Development and Implementation (without Parliament)																				

2022950064

12/12/91

Rating: B

1992 - 1996 Five-Year Plan

Program Summary

Program: Label/Closure Format Standardization

Category: Productivity/Cost **Included in 1991-1995 Plan:** No

Start Date: 1st Qtr. 1992 **Completion Date:** 4th Qtr. 1996

Program Description

Standardize label and closure formats to eliminate machine specificity in terms of both layout and roll/cut options.

Importance to PM-USA

- Limitation on production flexibility and response time
- High costs caused by reduced volume print runs, excess/duplicate inventories, obsolescence, film/engraving costs, expediting, and lost tandum run opportunities.
- Inadequate materials requirement planning tools.

Program Benefits

- Increased production flexibility
- Quicker resonse time
- Reduce costs by longer print runs, reducing excess/duplicate inventories, reduced obsolescence, reduced film/engravings costs, less expediting, more tandem runs

Program Leadership:

Functional Area Mfg Services **Department** Purchasing **Program Leader:** Latshaw

Support Required From	1992 Man-Years	Leadership Dept. (92)
Engineering	5.0	1.0
Tech Services		
Manufacturing		
QA		
Finance		

Capital Requirements (92) $ 00,000 **1993-1996** $ 00,000 **650 Timing** n/a

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Develop cross-functional team analysis																				
Present recommendations for resolution																				
Begin implementation																				
Complete implementation																				

2022950065

11/15/91

Rating: B

1992 - 1996 Five-Year Plan

Program Summary

Program: RL Squares

Category: Cost/Productivity **Included in 1991-1995 Plan:** No

Start Date: 1st qtr 92 **Completion Date:** 3rd qtr 94

Program Description

When RL is cut into 3/16" squares, a filling power gain is achieved over the normal cut. This gain results in a 5% weight reduction when 20% RL is used. Significant further development is still needed to confirm and develop a potential industrial application.

Importance to PM-USA

When included in Price Value brands only, a potential annual savings of $10 million can be realized based on 1995 estimated sales.

Program Benefits

This program may lead to investigations of other tobacco components cut in a similar manner, and/or a study to determine the importance of geometrical shape to filling power.

Program Leadership:

Functional Area Leaf **Department** Blending **Program Leader:** C. Moogalian

Support Required From	1992 Man-Years	Leadership Dept. (92)
Engineering	0.5	0.1
R&D	0.1	

Capital Requirements (92) $ unknown **1993-1996** $ --- **650 Timing** --

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Begin small scale cutter prototype testing to determine optimum cut size, feasibility, subjectives			■																	
Complete above						■														
Production prototype demonstration							■													
Implementation										■										

2022950066

11/15/91

Rating: B

1992 - 1996 Five-Year Plan

Program Summary

Program: Burley Stem Ultilization

Category: Cost/Productivity **Included in 1991-1995 Plan:** No

Start Date: 1st qtr 92 **Completion Date:** 4th qtr 92

Program Description

Study the usage of burley stems through ES and IS operations. Feasibility and subjective.

Importance to PM-USA

Reduced cost through usage of stem that is presently underutilized.

Program Benefits

Program Leadership:

Functional Area Leaf **Department** Blending **Program Leader:** L. Jennings

Support Required From **1992 Man-Years** **Leadership Dept. (92)**

Louisville

Capital Requirements (92) $ --- **1993-1996** $ --- **650 Timing** --

Program Milestones	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Cutting and expansion of stem																				
Subjective acceptance at specific levels																				

2022950067

11/15/91

Rating: B

1992 - 1996 Five-Year Plan

Program Summary

Program: Green Leaf Threshing Standards

Category: Cost/Productivity **Included in 1991-1995 Plan:** No

Start Date: 3rd qtr 92 **Completion Date:** 1st qtr 96

Program Description

Develop stemming standards that enhance strip usage (increased cigarettes per pound of strips) for all PM affiliates

Importance to PM-USA

Increased filling power
Reduced tobacco cost

Program Benefits

Program Leadership:

Functional Area Leaf **Department** Blending **Program Leader:** L. Jennings

Support Required From	1992 Man-Years	Leadership Dept. (92)
Technical Services		0.4
R&D	0.4	

Capital Requirements (92) $ unknown **1993-1996** $ --- **650 Timing** --

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Relate particle size to filling power																				
Develop means of obtaining best possible contributing particle size																				
Evaluate implementation of new threshing standards																				

2022950068

11/22/91

Rating: C

1992 - 1996 Five-Year Plan

Program Summary

Program: Tobacco Reclaim

Category: Cost/Productivity **Included in 1991-1995 Plan:** Yes

Start Date: Ongoing **Completion Date:** 4th qtr 92

Program Description

Implement central reclamation operation to reclaim returned goods filler rather than destroying at landfill.

Implement system to recover class W from total blend and cutting.

Importance to PM-USA

Program Benefits

Reduce cost of manufactured. Savings of centralized reclamation operation are estimated on $1 million annually.

Program Leadership:

Functional Area Engineering **Department** Process Eng **Program Leader:** W. Poorbaugh

Support Required From	1992 Man-Years	Leadership Dept. (92)
Manufacturing	0.5	1.0
Manufacturing Services	0.5	

Capital Requirements (92) $ Unknown **1993-1996 $** Unknown **650 Timing**

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Central reclamation operation																				
Class W recovery system																				

2022950069

11/22/91

Rating: C

1992 - 1996 Five-Year Plan

Program Summary

Program: Tobacco Handling

Category: Cost/Productivity **Included in 1991-1995 Plan:**

Start Date: Ongoing **Completion Date:** 4th qtr 93

Program Description

Implement improvements in the handling of tobacco from auction warehouse to primary processing line input. Specific projects are to handle Oriental, RL and BL in boxes, to implement automatic box stripping and automated docks/trucks.

Importance to PM-USA

Program Benefits

Reduce cost of goods manufactured.

Program Leadership:

Functional Area Engineering **Department** I.E. **Program Leader:** H. Marxen

Support Required From	1992 Man-Years	Leadership Dept. (92)
Manufacturing	0.1	0.3
Leaf	0.1	

Capital Requirements (92) $ TBD **1993-1996 $** TBD **650 Timing**

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Oriental, RL, BL in boxes																				
Automatic box stripping																				
Automated docks/trucks																				

2022935070

12/9/91

Rating: C

1992 - 1996 Five-Year Plan

Program Summary

Program: Tobacco Utilization

Category: Cost/Productivity **Included in 1991-1995 Plan:** No

Start Date: Began in 1991 **Completion Date:** 4th Quarter 1996

Program Description

Six individual projects are being scoped and initiated under the management of the committee. The projects are aimed at increasing the utilization of tobacco and minimizing tobacco waste

The committee is composed of members from the following departments: R&D, Engineering, Manufacturing, Technical Services, Quality Assurance, and Blending

Importance to PM-USA

Tobacco costs are the largest component of the PM USA variable manufacturing costs. Efforts to reduce OTM & Waste generation have significant financial impact. In addition, other uses of OTM may allow additionall financial benefits.

Program Benefits

- 1. Stemmery Discard Recovery - Using materials currently discarded could save $1 million/year.
- 2. OTM Review - Thorough review of OTM practices should optimize these operations.
- 3. Diet/Stem Recovery - Feed back of stems saves $500k/year in additional processing.
- 4. Winnower Shredding - will use same process as DIET/stem recovery.
- 5. Class 4 Reclaim - Using recovered filler from Classes 4 & 4M saves $400k/year.
- 6. High OV Tobaccos - Reduces purchases of high OV tobacco & problems with mold growth.

Program Leadership:

Functional Area Manufacturing **Department** Productivity **Program Leader:** C. E. Horner

Support Required From	1992 Man-Years	Leadership Dept. (92)
R&D		0.1
Engineering		
Blending		
Tech. Srvs.		
QA		

Capital Requirements (92) $ _____ **1993-1996 $** _____ **650 Timing** _____

Project: 1. $500-700k

Program Milestones

	1992 1 2 3 4	1993 1 2 3 4	1994 1 2 3 4	1995 1 2 3 4	1996 1 2 3 4
Stemmery Discard Recovery					
OTM Review					
Diet/Stem Recovery					
Winnower Shredding	(Not developed until DIET stem recovery is proven)				
Class 4 Reclaim					
High OV Bright and Burley Tobaccos	(Not defined)				

2022950071

12/9/91

12/12/91

Rating: C

1992 - 1996 Five-Year Plan

Program Summary

Program: Licorice Sourcing Optimization

Category: Cost **Included in 1991-1995 Plan:** No

Start Date: 1st qtr 92 **Completion Date:** 4th qtr 92

Program Description

Evaluate alternative strategies to overcome prohibitive pricing on natural licorice (including substitute licorice, self manufacture, and contract manufacture). Implement most feasible strategy which must be in concert with long-term PM ingredient guidelines.

Importance to PM-USA

Annual licorice cost is $24mm

Each 5 percent cost reduction is a $1.2mm savings

Program Benefits

Avoid inflated price increases resulting from monopolistic supply situation where MacAndrews and Forbes controls almost 90% of free world licorice supply.

Program Leadership:

Functional Area Manufacturing Svcs **Department** Chem, Comp **Program Leader:** Forsmark

Support Required From	1992 Man-Years	Leadership Dept. (92)
R&D		0.0

Capital Requirements (92) $ _____ **1993-1996** $ _____ **650 Timing** n/a

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Complete definition of alternatives																				
Commence economic evaluation of viable alternatives																				
Complete economic analysis, present recommendation																				
Initiate implementation																				
Timetable dependent upon option - could take 24 months																				

2022950072

12/12/91

Rating: C

1992 - 1996 Five-Year Plan

Program Summary

Program: Label Paper Consolidation

Category: Cost **Included in 1991-1995 Plan:** No

Start Date: 1st qtr 92 **Completion Date:** 1st qtr 93

Program Description

Consolidate label and closure base paper to one supplier instead of the current two.

Importance to PM-USA

Potential cost savings
Potential efficiency gains

Program Benefits

Potential cost savings
Move uniform label/closure base stock

Program Leadership:

Functional Area Manufacturing Svcs **Department** Packaging **Program Leader:** Mgr

Support Required From	1992 Man-Years	Leadership Dept. (92)
Technical Services		0.0
QA		
Printers		

Capital Requirements (92) $ 00,000 **1993-1996** $ 00,000 **650 Timing**

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Evaluate machinability, printability, quality of current sheets; solicit proposals																				
Complete evaluation, recommend to mgmt																				
Initiate implementation																				
Complete implementation																				

2022950073

11/15/91

Rating: C

1992 - 1996 Five-Year Plan

Program Summary

Program: Cigarette Paper Consolidation

Category: Cost/Productivity **Included in 1991-1995 Plan:** no

Start Date: 1st qtr 92 **Completion Date:** 4th qtr 92

Program Description

Determine the feasibility of reducing the number of grades of cig papers maintained in inventory:
Determine quantitative relationships between paper parameters on performance
Using existing cig design model, evaluate # of cig papers required to maintain performance/attributes
Using response surface methodology, design minimum # of cig papers needed for existing brands.
Going from 7 to 2 papers could generate savings. Going to 3 or 4 would produce no savings.
Implement change to best set of cig paper designs, if 2 can be designed to satisfy requirements.

Importance to PM-USA

Maintaining tar delivery for all existing brands requires changes in cig paper to compensate for changes in tobacco blend.
At present, a total of 7 cig papers are maintained in inventory to cover needs.
If suitable cig paper designs could be developed, much of the tar control would be achieved by changing tipping paper ventilation levels.

Program Benefits

Measurable: If consolidation to 2 cig papers is possible, $300,000 savings
Intangible: Better inventory management. Fewer operating variables for manufacturing
Unknown but estimated: Better efficiency for vendor production and inventory management

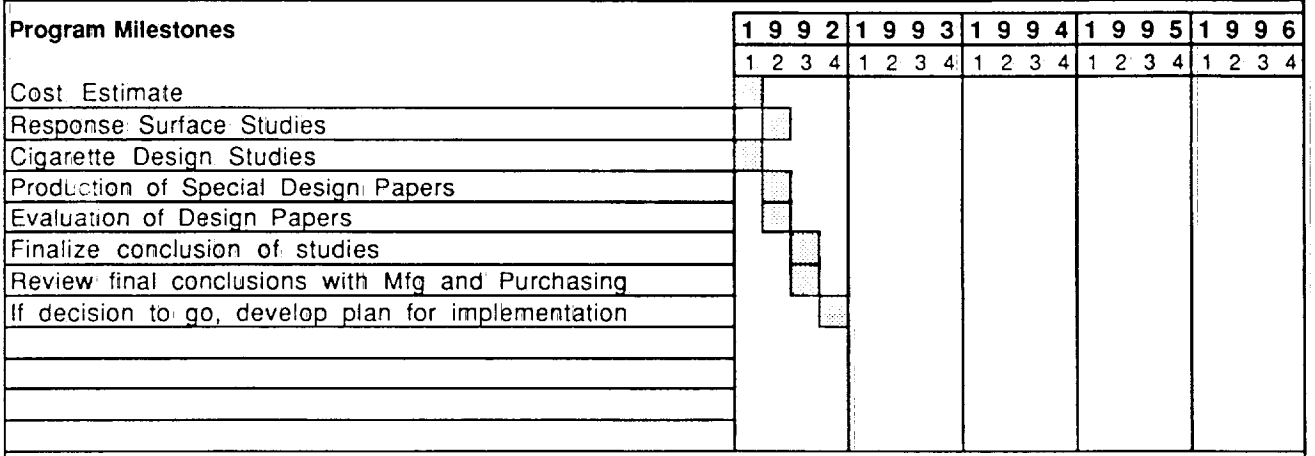
Program Leadership:

Functional Area R&D **Department** Product Dev **Program Leader:** S. Baldwin

Support Required From	1992 Man-Years	Leadership Dept. (92)
QA	0.3	4.0
Ops Svcs	0.2	
Tech Svcs	0.2	
Purchasing	0.2	
Engineering	0.2	

Capital Requirements (92) $ none **1993-1996 $** _____ **650 Timing** _____

Program Milestones



2022950074

12/12/91

Rating: C

1992 - 1996 Five-Year Plan

Program Summary

Program: MRO Optimization/Paperless Requisitioning

Category: Productivity/Cost **Included In 1991-1995 Plan:** Yes

Start Date: 1st Qtr. 1991 **Completion Date:** 4th Qtr. 1995

Program Description

Develop the necessary computer programs to "automate" the manual processing of paper requisitions, requests for quotes, bid tabulation, policy adherence requirements, etc.; develop the necessary computer platforms to provide requisitioners with definitively described items; develop the capability to better track and identify items purchased and potential for consolidated purchases with fewer suppliers; and develop electronic systems communication capability between other internal departments and with suppliers.

Importance to PM-USA

- To reduce internal and external lead-time
- To reduce inventory
- To reduce the number of suppliers used and increase cost savings potential
- To decrease redundant data entry internal and externall to the department and company
- To improve service to requisitioners
- To install electronic clocks and research to ensure policies and procedures are correctly applied

Program Benefits

Expected results include improved productivity in all facets of MRO procurement from requisitioning to invoice payment and reduction in the cost of goods and services purchased. Dollar savings are unquantified at this time. Improved financial controls are another benefit, as well as enhanced vendor research and management.

Program Leadership:

Functional Area Mfg. Services **Department** MRO **Program Leader:** Miles

Support Required From	1992 Man-Years	Leadership Dept. (92)
MRO Purchasing		2.0
Cabarrus Purchasing	0.2	
Louisville Purchasing	0.2	
Information Services	0.5	
Finance	0.5 ($40,000 budgeted)	

Capital Requirements (92) $ 0,000 **1993-1996** $ 00,000 **650 Timing**

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Resource allocation confirmed (4th qtr 91)																				
Remaining project timetable to be completed following resource confirmation																				

12/9/91

Rating: C

1992 - 1996 Five-Year Plan

Program Summary

Program: Company Book Inventory and Warehouse Reconciliation

Category: Cost/Productivity **Included in 1991-1995 Plan:** Yes

Start Date: 4th Qtr 91 **Completion Date:** TBD

Program Description

Automate month-end book inventory reconciliation process for public warehouses.

Importance to PM-USA

Upgrade the current manual process through systems automation thus providing information in a more timely manner and with increased accuracy.

Program Benefits

Increase productivity by reducing turnaround time required in getting reconciliation reports back from public warehouses and reduce verification of accuracy of mathematical calculations required in current manual process.

Program Leadership:

Functional Area Manufacturing Svcs **Department** Cust Svc **Program Leader:** Bill Pearce

Support Required From	1992 Man-Years	Leadership Dept. (92)
Information Services		0.1

Capital Requirements (92) $ _____ **1993-1996 $** _____ **650 Timing** _____

Program Milestones	1992 1 2 3 4	1993 1 2 3 4	1994 1 2 3 4	1995 1 2 3 4	1996 1 2 3 4
Proposed system is being analyzed as part of Two Way EDI System					

2022950076

12/9/91

Rating: C

1992 - 1996 Five-Year Plan

Program Summary

Program: Charge-back system for Transportation Services

Category: Productivity **Included In 1991-1995 Plan:** No

Start Date: 2nd Qtr 1992 **Completion Date:** 4th Qtr 1996

Program Description

Develop a standard of measurement for each location. This standard will incorporate the type of cargo handled (finished goods, tobacco, materials, etc) and the distances between locations. Develop an automated timekeeping system for recording each driver's hours by location for over 100 drivers. Reach agreement with users as to method of charge-back and type and frequency of data needed for each.

Importance to PM-USA

Decision are currently made by users of transportation services without regard to the cost of these services. Having each location pay for these services should help them make decision with PM's overall costs as a consideration.

Program Benefits

Charging users for transportation services willl force each department to consider these costs when making decisions that affect the amount of transportation services needed. Having a uniform measurement system will enable Truck Pool Management to better identify areas of low productivity. Overall benefit will be to provide needed transportation services at the lowest cost to PM-USA.

Program Leadership:

Functional Area Manufacturing Svcs **Department** Truck Pool **Program Leader:** Bill Gerrity

Support Required From	1992 Man-Years	Leadership Dept. (92)
Information Services		0.0
Operations Analysis		

Capital Requirements (92) $ TBD **1993-1996** $ 00,000 **650 Timing**

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Standard unit of measurement determined																				
Evaluate systems for recording and analyzing driver's time																				
Start automated data collection																				
Evaluate automated versus manual time systems																				
Start allocating transportation costs on test basis																				
Provide data to each location for budget purposes																				
Begin monthly cost transfers																				

2022950077

12/9/91

Rating: C

1992 - 1996 Five-Year Plan

Program Summary

Program: Electronic Data Interchange with Carrier

Category: Cost/Productivity **Included in 1991-1995 Plan:** Yes

Start Date: 3rd Quarter 1991 **Completion Date:** 4th Quarter 1995

Program Description

Plan, design and implement an EDI system that will enable Philip Morris to transmit and receive shipping information with carriers in an industry-wide standard format.

Importance to PM-USA

This strategy was chosen as an alternative to communication by mail, telephone or in person primarily due to the heavy volume of paperwork required for each shipment. The overwhelming efficiency benefits gained via EDI far outweigh the consequences of manually continuing to process each piece of paper individually. All other strategies require manual intervention to communicate and transact business, therefore requiring a duplication of data entry effort and related tasks.

Program Benefits

A standardized EDI system would enable the transmission of many of the paper documents (bills of lading, manifests, freight bills, etc). Capturing these documents electronically would eliminate required manual intervention and therefore reduce the possibility of human error. Studies indicate that the average cost of manual processing of these shipping documents is about $25 versus $2 for electronic processing.

Program Leadership:

Functional Area Manufacturing Svcs **Department** Transportation **Program Leader:** Don Schafer

Support Required From	1992 Man-Years	Leadership Dept. (92)
Information Services		0.1
Finance		

Capital Requirements (92) $ TBD **1993-1996 $** _____ **650 Timing** _____

Program Milestones	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Initiate feasability study with finance and IS to identify financial and business impact to PM and determine if project should go forward. (4th Qtr 91)																				

2022950078

12/12/91

Rating: C

1992 - 1996 Five-Year Plan

Program Summary

Program: Two-way EDI with Public Warehouses

Category: Cost/Productivity **Included in 1991-1995 Plan:** Yes

Start Date: Third quarter 1991 **Completion Date:** Mid-1995

Program Description

Plan, design and implement a two-way EDI system that will enable exchange of inter/intracompany business transactions in a standard format. This system would enable the transmission of warehouse receipts, storage and handling invoices, and other business documents from computer to computer which would expedite the transfer of more accurate data and reduce the possibility of human error.

Importance to PM-USA

Daily business transactions between Transportation Dept. and public warehouses throughout the U.S. produce voluminous amounts of paperwork requiring excessive and tedious amounts of clerical labor, extensive filing systems for record retention. This system would improve departmental efficiency, reduce paperwork, telephone calls and manual data entery as well as improve data accuracy and integrity.

Program Benefits

Measurable over the long term, it will assist in controlling overtime costs as well as temporary employees. Intangible benefits are related to speed in exchange of information as well as timeliness. With the growth of business and paperwork required to handle this growth, a well designed system is imperative.

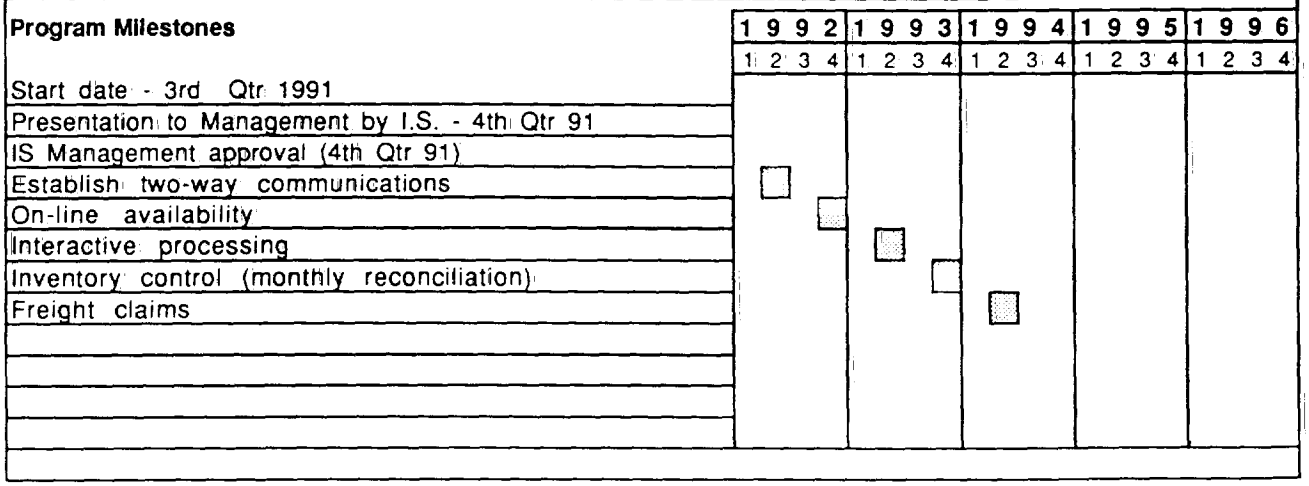
Program Leadership:

Functional Area Manufacturing Svcs **Department** Transportation **Program Leader:** Don Schafer

Support Required From	1992 Man-Years	Leadership Dept. (92)
Information Services		0.1

Capital Requirements (92) $ TBD **1993-1996** $ TBD **650 Timing**

Program Milestones



2022950079

12/9/91

Rating: C

1992 - 1996 Five-Year Plan

Program Summary

Program: CHP - Printing Press

Category: Cost/Productivity **Included In 1991-1995 Plan:**

Start Date: 2nd qtr 1992 **Completion Date:** 1st qtr 1995

Program Description

This project consists of the addition of one Rotogravure Printing Press, one slitter and building modifications and expansion to increase the production volume of soft pack labels and tipping items.

Importance to PM-USA

Increase production speeds
Reduce cost of label and tipping products

Program Benefits

This project will replace an antiquated, 45-year old, non-registered press with a state-of-the-art Rotogravure Printing Press. The improved equipment and material flow will increase production speeds and will reduce the cost of label and tipping products by 1.8 million dollars per year.

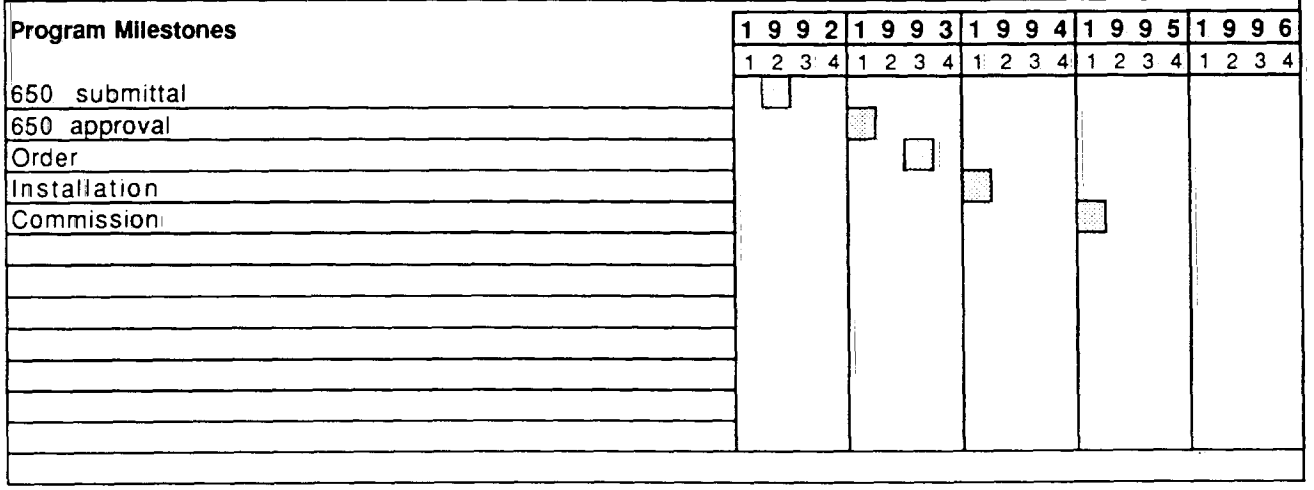
Program Leadership:

Functional Area Manufacturing Svcs **Department** CHP **Program Leader:** Rberts/Lmborn

Support Required From	1992 Man-Years	Leadership Dept. (92)
		0.0

Capital Requirements (92) $ 7,360,000 **1993-1996** $ 000,000 **650 Timing** '92

Program Milestones



2022950080

11/15/91

Rating: C

1992 - 1996 Five-Year Plan

Program Summary

Program: Hogshead Material - Damage

Category: Cost/Productivity **Included in 1991-1995 Plan:** No

Start Date: 2nd qtr 92 **Completion Date:** 1st qtr 93

Program Description

Develop program to measure damage to hogshead material received from each manufacturing location. Information obtained will be provided to each factory so they can determine how damage occurred and necessary corrective action.

Importance to PM-USA

Reduced cost - hogshead repair

Program Benefits

Reduce cost in hogshead repair and reduce foreign matter in tobacco filler.

Program Leadership:

Functional Area Leaf **Department** Hogshead Repai **Program Leader:** H.C. Oakes

Support Required From	1992 Man-Years	Leadership Dept. (92)

Capital Requirements (92) $ --- **1993-1996** $ --- **650 Timing** --

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Develop system																				
Determine effectiveness																				
Determine savings																				

2022950081

11/15/91

Rating: C

1992 - 1996 Five-Year Plan

Program Summary

Program: Green Tobacco Packing

Category: Cost/Productivity **Included In 1991-1995 Plan:** No

Start Date: 3rd qtr 92 **Completion Date:** 1st qtr 95

Program Description

Develop program to study the effects of increasing tobacco density in green tobacco bales. Evaluate impact on tobacco degradation and subjectives.

Importance to PM-USA

Reduce cost

Program Benefits

Program Leadership:

Functional Area Leaf **Department** Purchasing **Program Leader:** H. Oakes

Support Required From **1992 Man-Years** **Leadership Dept. (92)**

Capital Requirements (92) $ --- **1993-1996** $ --- **650 Timing** --

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Subjective effects for plant position																				
Degradation of lamina																				
Handling efficiency Stemmery																				
Moitsure conditioning effectiveness																				

2022950082

11/15/91

Rating: C

1992 - 1996 Five-Year Plan

Program Summary

Program: Allocation of Tobaccos for Stemming

Category: Cost/Productivity **Included in 1991-1995 Plan:** No

Start Date: 2nd qtr 92 **Completion Date:** 3rd qtr 93

Program Description

Develop cost method of allocating PM USA and PMI tobaccos between geographical stemming locations based on:

I Production efficiency

II Optimization of Freight Cost

Importance to PM-USA

Cost reduction

Program Benefits

Program Leadership:

Functional Area Leaf **Department** Purchasing **Program Leader:** H. Oakes

Support Required From **1992 Man-Years** **Leadership Dept. (92)**

Tobacco Processing (Processing Plants)

Capital Requirements (92) $ --- **1993-1996** $ --- **650 Timing** --

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Optimization of each stemmery																				
Optimization of freight cost to Stemmery																				
Optimization of freight cost to Manufacturing Warehouses																				

2022950083

11/15/91

Rating: C

1992 - 1996 Five-Year Plan

Program Summary

Program: Trucking Cost Simulation

Category: Cost/Productivity **Included In 1991-1995 Plan:** No

Start Date: 2nd qtr 92 **Completion Date:** 3rd qtr 93

Program Description

Analyze financial statements, cost elements making up transport costs in order to assess rate adjustments requested by transportation companies. Use simulation tools to project impacts of varying rate changes.

Importance to PM-USA

Cost reduction

Program Benefits

Program Leadership:

Functional Area Leaf **Department** Purchasing **Program Leader:** H. Oakes

Support Required From 1992 Man-Years Leadership Dept. (92)

Capital Requirements (92) $ _____ **1993-1996 $** _____ **650 Timing** _____

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Determine all factors influencing total cost/Develop model																				
Determine most efficient operation																				
Follow cost increases of each factor and est. future cost																				

2022950084

1992-1996 FIVE YEAR PLAN MAJOR PROGRAMS

Category: Quality

Program Title	Functional Area	Department	Leader	Rating	Ref.
Visual/Functional Quality Standards	Mfg. Services	QA Prod Audit	C. Krausse	A	E-1
Quality Control Standardization	Technical Svcs	Technical Svcs	M. Willard	A	E-2
Product Vision Inspection	Engineering	Applied Tech	E. Richardson	A	E-3
Good Manufacturing Practices	Technical Svcs	Spec/Support	J. Hutchison	A	E-4
Direct Materials Specifications	Technical Svcs	Spec/Support	S. Southard	A	E-5
Adhesives	R&D	Analy Spc	Zimmerman	A	E-6
Quality Awareness Beyond Manufacturing	Mfg. Services	Quality	Knudson	A	E-7
Consumer Complaint Analysis - TOS	Mfg. Services	Quality	Knudson	A	E-8
Offset Printing - Subjective Impact	Mfg. Services	PTS	C. Campbell	B	E-9
On Press Vision Inspection	Mfg. Services	Purchasing	Latshaw	B	E-10
Stable Menthol	R&D	Flavor Tech	H. Burnley	B	E-11
Corp. Brand-Worldwide Subjective Evaluati	Leaf	Blending	D. Heidsieck	B	E-12
Tobacco Particle Size Analysis for High Spe	Leaf	Blending	Jennings	B	E-13
Lark Porous Combining Wrap	R&D	Filter Tech	T. Callaham	C	E-14
Product/Process Monitoring Technology	R&D	Prod Dev	T. Sanders	C	E-15
Blended Strips Reformulation	Leaf	Blending	D. Heidsieck	C	E-16

12/12/91

Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: Visual/Functional Quality Standards

Category: Quality Improvement and Focus **Included in 1991-1995 Plan:** No

Start Date: 3rd qtr 1991 **Completion Date:** 1st qtr 1994

Program Description

One set of quality standards will be developed and implemented that will specifically measure attributes that are of consumer concern. The needs for multiple severity levels will be evaluated.

All standards and measurements will correlate to consumer issues such as tear tape, filter fall off, etc. The program is to focus on consumer issues.

Importance to PM-USA

Product Audit standards, as currently written, may focus process improvement attention to areas that are not of top, or of any significant consumer concern. Because of this, resources are sometimes allocated in a manner that may have no positive consumer impact.

It is vitally important that we analyze and determine the visual and functional characteristics of our product that are of top concern to our consumers.

Program Benefits

Proposed standards will be developed to address attributes that provide customer satisfaction and dissatisfaction. These standards will be validated initially, and on an ongoing basis, by Customer Complaint as well as customer satisfaction surveys. Improved quality focus and consistent quality measures will provide significant benefits.

Program Leadership:

Functional Area Manufacturing Svcs **Department** QA Prod Audit **Program Leader:** C. Krausse

Support Required From	1992 Man-Years	Leadership Dept. (92)
PM-USA factory management		0.5
R&D Marketing Research		

Capital Requirements (92) $ none **1993-1996 $** none **650 Timing**

Program Milestones	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Development and validation of proposed standards																				
Estimate of revised defect levels																				
Implementation of new standards																				
On-going standards validation																				

2022950086

12/3/91 Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: Quality Control Standardization

Category: Quality **Included in 1991-1995 Plan:** Yes

Start Date: January, 1991 **Completion Date:** 4th Quarter, 1994

Program Description

The QC Standardization initiative is designed to accomplish the following objectives: Identify the needs of the Quality Assurance Organization in terms of standards and specifications; Procedures and Methods; Equipment and Facilities; Human resource skills and quantity. When these needs are met Quality Assurance should be able to ensure our manufacturing processes will provide the desired product quality.
Develop a plan of action whereby Quality Control requirements: are consistently implemented to achieve and maintain desired product quality and; can be effectively managed in a manner which represents good value.

Importance to PM-USA

- o Reduction of routine testing will allow reassignment of resources to quality improvement efforts that in turn lead to improved quality (audit to control).
- o Consistent and comparable data between factories should result in better organized data for management use and reduce requirements for special testing.
- o Improvement in the analysis and reporting of quality audit data will allow the development of actionable plans for quality improvements which should lead to improved quality and productivity

Program Benefits

- o Increased Company assets. - Procedures, Methods, Specifications.
- o Improvement in understanding the basics, interpreting requirements, identifying and solving problems related to standardization.
- o Lower quality costs related to reduced sampling.

Program Leadership:

Functional Area QC Standardization **Department** Tech Svcs **Program Leader:** M. Willard

Support Required From	1992 Man-Years	Leadership Dept. (92)
Factory Management	1.0	4.0
Factory Quality Assurance/Central QA	12.0	
Purchasing/Supply Chain	1.0	
Technical Services	1.0	
R&D/Engineering	1.0	

Capital Requirements (92) $ 500,000 **1993-1996** $ 200,000 **650 Timing**

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Sampling and Testing Requirements Procedures and Methods																				
- Primary(ET/ES/IS)																				
- Flavors																				
- Processing Plants																				
- Cigarette Manufacturing																				
- Incoming Materials																				
- Audits and Services																				

2022950087

11/22/91

Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: Product Vision Inspection

Category: Quality **Included in 1991-1995 Plan:** Yes

Start Date: 1st qtr 92 **Completion Date:** 4th qtr 95

Program Description

Systems are being developed for visual inspection of 100% of the product at the point of manufacture. Initial implementation will focus on rejecting defective cigarettes/packs to reduce number of defects delivered to customers and provide operator feedback information in the form of cig/pack image display. Subsequent development will focus on process control improvement through data acquisition and analysis to identify the causes of non-random product defects. Process control will be accomplished manually, but application of automatic, closed loop components will be evaluated.

Importance to PM-USA

Key action for PM-USA to regain a competitive advantage on cigarette quality and strengthen the competitive advantage on pack quality as measured by the competitive audit.

Program Benefits

Reduce product defects, as measured by the Richmond Audit, by:

Cigarette	61%
Soft Pack	54%
Hard Pack	20%

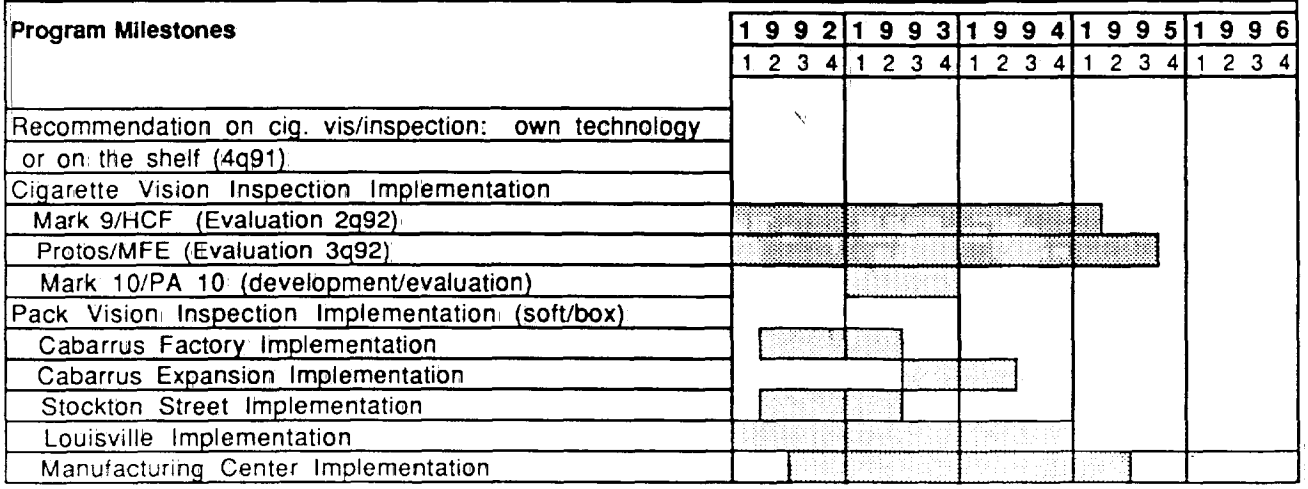
Program Leadership:

Functional Area Engineering **Department** Applied Tech **Program Leader:** E. Richardson

Support Required From	1992 Man-Years	Leadership Dept. (92)
Manufacturing	4.0	5.0
Information Services	2.0	
Quality Assurance	0.5	

Capital Requirements (92) $ 4,700,000 **1993-1996 $** 25,000,000 **650 Timing**

Program Milestones



2022950088

12/3/91

Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: Good Manufacturing Practices

Category: Quality **Included in 1991-1995 Plan:** Yes

Start Date: January, 1991 **Completion Date:** December, 1996

Program Description

- o Develop, document, and maintain Process Specifications and Good Manufacturing Practices for all Tobacco Processing and Cigarette Manufacturing Operations.
- o Process Specifications - Primary Processing: Completed in 1991. Currently in maintenance phase.
- o Good Manufacturing Practices - Primary Processing: To be issued in 1991

Importance to PM-USA

- o The basis for long term, continuous quality improvement.
- o Improvement in all aspects of the manufacturing process, through problem avoidance.
- o The basis for standardization within and between factories.
- o The basis for training programs.

Program Benefits

- o Reduced variation in our products by improving the consistency of processing methods

Program Leadership:

Functional Area Technical Services **Department** Specifications and Support **Program Leader:** J. Hutchison

Support Required From	1992 Man-Years	Leadership Dept. (92)
Tobacco Processing Group	0.5	1.0
Plant Operations: Product. Mgmt. & QA	2.0	
R&D/Leaf	0.5	
Engineering: Manuf. Eng. Cent. Eng.	0.5	

Capital Requirements (92) $ 0 **1993-1996 $** 0 **650 Timing**

Program Milestones	1992 1 2 3 4	1993 1 2 3 4	1994 1 2 3 4	1995 1 2 3 4	1996 1 2 3 4
ET/ES/IS Processes					
Export Strip: 20th & MZM					
Stemmeries					
Sheet Plants: Park 500 & BL Plant					
Cigarette Manufacturing - All Locations					
Maintenance of GMP & Process Specs					

2022950089

12/3/91

Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: Direct Materials Specifications

Category: Quality/Productivity **Included in 1991-1995 Plan:** No

Start Date: July, 1991 **Completion Date:** December, 1996

Program Description

- o Develop a business system to document, and automate the maintenance and distribution of Direct Material Specifications
- o Develop specifications which adequately describe to our vendors the desired form, fit, and function of the material to be purchased.

Importance to PM-USA

- o Ensure Direct Material Specifications are consistent with Finished Product Quality Standards and Specifications
- o Reduce product variability
- o Improve productivity performance and reduce costs

Program Benefits

- o Improvements in Quality and Productivity/Cost through improvements in Direct Materials and Consolidation of Direct Material Specifications

Program Leadership:

Functional Area Technical Services **Department** Specifications and Support **Program Leader:** S. Southard

Support Required From	1992 Man-Years	Leadership Dept. (92)
Purchasing	0.5	4.5
Engineering	0.5	
Factories/Operations Services	2.0	
R&D	0.5	
Centrall QA/Factory QA	0.5	

Capital Requirements (92)* $ 250,000 **1993-1996** $ 0 **650 Timing** 1/92

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
System Development and Loading																				
System Maintenance																				
Specification Development																				

* Capitall requirements have been forecasted, by IS, as part of total system requirements to support Supply Chain.

A216-52/5

202295090

11/15/91

Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: Adhesives

Category: Quality **Included in 1991-1995 Plan:** Yes

Start Date: 1st qtr 91 **Completion Date:** 4th qtr 93

Program Description

Develop analytical specs for adhesives to include detailed analysis of composition, development of information concerning adhesive composition, and identifying the exact nature of components used (i.e., Proxel GXL). Implement an adhesive database for storage/retrieval of information obtained from analytical measurements. Establish signed agreements with vendors for disclosure of ingredients for safety and health reasons. Develop vendor contracts, initiate site visits for both program intro and receipt of key ingredients. Develop adhesives specs for optimum machineability.

Importance to PM-USA

Current specifications used in some of the mfg locations require only testing of pH, solids and viscosity. These tests do not ensure product reproducibility, the nature of the material or the various additives which may be used in the formulation. Current specs are based solely on the manufacturers' recommended testing program. Changes in potential legislation require a more indepth knowledge of content and consistency of products used. A similar spec program for flavors was completed resulting in savings due to more control on purchased product.

Program Benefits

Reduce/Eliminate adhesives which were formulated incorrectly from entering the Philip Morris system. Understand the nature of the composition of the adhesives in detail.
Increased control of product. Facilitate correlationof machineability characteristics to specific adhesive physical and chemicall properties in order to develop product specifications for vendors.

Program Leadership:

Functional Area R&D **Department** Analy Spec **Program Leader:** Zimmermann

Support Required From	1992 Man-Years	Leadership Dept. (92)
Purchasing	0.5	10.0
Manufacturing Services	0.5	
Technical Services	0.5	

Capital Requirements (92) $ 10,000 **1993-1996 $** TBD **650 Timing**

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Component ID/Combiner/Tear Tape																				
Specification Sideseam/Tow Anchor																				
Specification/Combiner/Tear Tape																				
Specification/Tipping/Plug Lap Seam																				
Specification/Innerframe/Case Packer																				
Specification/Blank/Stamp																				
Specification/Carton End/Carton Top Flap/Label																				

2022950091

12/12/91

Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: Quality Awareness Beyond Manufacturing

Category: Quality **Included in 1991-1995 Plan:** Yes

Start Date: 2nd qtr 91 **Completion Date:** 4th qtr 95

Program Description

To expand the boundaries of quality awareness beyond manufacturing. From Field Assessment results, develop programs for improving practices in product handling and storage throughout the distribution chain. Identify, early in the process, packaging material designs which negatively impact manufacturing and/or product quality and provide objectives data for resolution. Develop, implement and maintain programs with suppliers directed toward managed continuous improvement in quality & integrated into the Supplier Alliance Program.

Importance to PM-USA

Enhance product quality through non-traditional opportunities - from packaging concepts through retail sales. Assure product quality is maintained and handled and processed through the distribution chain. Increase manufacturing capability to efficiently meet new brand production schedules, costs, and product quality expectations. Strategic changes are necessary to improve our business systems and reduce total costs of direct materials.

Program Benefits

Enhanced product quality in consumers' hands. Increased manufacturing capability to meet new brand production schedules, cost and quality expectations. Reduced total cost of purchase, storage and handling of direct materials.

Program Leadership:

Functional Area Manufacturing Svcs **Department** Quality **Program Leader:** Knudson/Busic

Support Required From	1992 Man-Years	Leadership Dept. (92)
Commercial Development	0.2	6.7
Packaging Operations	0.1	
Purchasing Technical Services	0.3	
Sales reps/Management	1.0	
Quality Engineering	0.1	

Capital Requirements (92) $ _____ **1993-1996 $** _____ **650 Timing** n/a

Program Milestones	1992 1 2 3 4	1993 1 2 3 4	1994 1 2 3 4	1995 1 2 3 4	1996 1 2 3 4
Field Assessments					
Quality Certifications of 2 additional suppliers					
Support additional partnering efforts					
Support additional FFD items/suppliers					
Distribution training film					
Retail training film					
Export storage and handling manuall					
On-going needs assessment and training for storage and handling in the distribution chain					

2022950092

12/3/91

Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: Taste, Odor, Stale Focus Utilizing Customer Complaint Data Base

Category: Quality Improvement and Focus **Included in 1991-1995 Plan:**

Start Date: 1st qtr 92 **Completion Date:** 3rd qtr 1994

Program Description

Efforts to address Taste/Odor/Stale complaints will be expanded and systematically focused to direct resources in the investigation and correction of identified T/O/S causes. The Customer Complaint Data Base will continue as the baseline measurement source to determine impact of these actions. Consumer information describing taste dissatisfaction and factors causing the propensity complaint will be gained via surveying focus group contact and increased consumer call backs. This will supplement the GMP Audit Program & Mktg Distribution initiative.

Importance to PM-USA

Taste, Odor, Stale is the largest individual complaint item representing 24% of all product quality complaints. The complaint per billion cigarettes sold trend has been continuously increasing since 1st qtr 89, while the composite of all other complaints has shown improvement. T/O/S complaints represent potentially lost customers, depending upon the frequency or severity of the problem experienced.

Program Benefits

Minimizing Taste, Odor, Stale complaints will increase the consumers overall acceptance and perception of the product, thereby ensuring brand loyalty and increasing sales potential, surveys, focus panel contacts. Smoke panels will be utilized to gain more insight to the consumer's description of taste dissatisfaction. This will be combined with the systematic analysis of the consumer complaint data base in identifying areas for improvements.

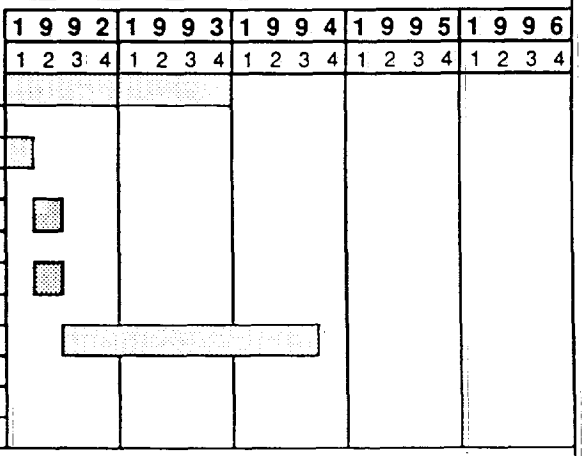
Program Leadership:

Functional Area Manufacturing Svcs **Department** QA **Program Leader:** C.Krausse

Support Required From	1992 Man-Years	Leadership Dept. (92)
R&D Product Evaluation		0.5
Marketing Research		
R&D Sensory Evaluation		
Quality Engineering		
KDF Consumer Affairs/Quality Assurance		

Capital Requirements (92) $ **1993-1996 $** **650 Timing**

Program Milestones



2022950093

12/12/91

Rating: B

1992 - 1996 Five-Year Plan

Program Summary

Program: Offset Printing - Subjective Impact

Category: Quality **Included In 1991-1995 Plan:** No

Start Date: 1st qtr 92 **Completion Date:** 4th qtr 92

Program Description

Eliminate negative subjective impact of conventional and UV offset by identifying and adopting suitable alternative ink systems/processes or other means of protecting cigarettes from solvents.

Importance to PM-USA

Proven adverse impact on subjectives
Growing taste, odor, stale complaints
Increasing importance of promotional programs

Program Benefits

Prevention of cigarette odor contamination
Regain use of offset printing for promotional and possibly normal product packaging to take advantage of the process' low volume economics and fine print capabilities
Quality advantage over competitors

Program Leadership:

Functional Area Mfg Services **Department** PTS **Program Leader:** C. Campbell

Support Required From	1992 Man-Years	Leadership Dept. (92)
R&D - analytical, subjective, safety	2.0	0.1
QA		
Printers, Ink Manufacturers		

Capital Requirements (92) $ 00,000 **1993-1996 $** 00,000 **650 Timing** n/a

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Have 2 suppliers run Hostmann Steinburg low odor inks																				
Complete evaluate of 2nd low odor ink system																				
Evaluate economics of low-odor offset processes																				
Implement best fit program on promos																				
Begin testing low volume production materials																				

2022950094

12/12/91

Rating: B

1992 - 1996 Five-Year Plan

Program Summary

Program: On-Press Vision Inspection

Category: Quality **Included In 1991-1995 Plan:** Yes

Start Date: 2nd Qtr. 1991 **Completion Date:** 4th Qtr. 1993

Program Description

Develop and install on-press vision inspection systems at all PM USA printers.

Program is a joint effort with Research and Development and Colonial Heights Packaging. If successful at CHP, technology will be transferred to other suppliers.

Importance to PM-USA

Lacking vision inspection systems, printers cannot now reliably catch intermittent print problems.

Program Benefits

- Eliminate costly occurrences of "hidden" print defects in Manufacturing.
- Provide printers with process control tool.
- Facilitate Fast Flow/Reduced incoming inspection.

Program Leadership:

Functional Area Manufacturing Svcs **Department** Purchasing **Program Leader:** Latshaw

Support Required From	1992 Man-Years	Leadership Dept. (92)
CHP	2.0 total	1.0
R&D		
QA		

Capital Requirements (92) $ 200,000 **1993-1996** $ 00,000 **650 Timing** n/a

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Complete tech assessment of opposite vs R&D system (4th qtr 1991)																				
Begin installation and testing at VFB																				
Complete implementation at all suppliers																				

2022950095

11/22/91

Rating: B

1992 - 1996 Five-Year Plan

Program Summary

Program: Stable Menthol

Category: Quality **Included in 1991-1995 Plan:** yes

Start Date: Began in 1991 **Completion Date:** 4th qtr 92

Program Description

Develop new menthol technology to produce consistent menthol delivery by October 1992.
Develop new menthol technology to produce a charcoal filtered menthol cigarette for sale in Japan by second quarter 1993.

Importance to PM-USA

Menthol migrates from rod to filter resulting in decrease in smoke menthol deliveries over time
Stable menthol technology would result in products with consistent puff and contant menthol delivery
Stable menthol tech could be used for production of a charcoal filtered menthol cig for sale in Japan

Program Benefits

Measurable: Decrease in customer complaints (14.6% of consumer complaints)
Decrease menthol loss by eliminating spray system

Intangible: Proprietary technology providing a competitive advantage. Reduce variation in menthol delivery.

Unknown but estimated: Provides a potential new brand for Japan

Program Leadership:

Functional Area R&D **Department** Flavor Tech **Program Leader:** H. Burnley

Support Required From	1992 Man-Years	Leadership Dept. (92)
Engineering	1.5	8.0

Capital Requirements (92) $ unknown **1993-1996** $ unknown **650 Timing**

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Pilot scale equip const for alginate microcapsules																				
Decision re: application of alg. microcap. to tobacco																				
Complete methodology for poly application to tobacco																				
Complete study on pyrolysis and smoke chemistry of poly																				
Use optimum tech to dev prototypes and POL test protos																				
Develop prototypes for charcoal filtered menthol cig																				
Initiate studies for scale-up of optimum methodology																				
Consumer test charcoal filtered menthol cigarette																				

2022950096

11/15/91

Rating: B

1992 - 1996 Five-Year Plan

Program Summary

Program: Corp. Brand - Worldwide Subjective Evaluation

Category: Quality **Included in 1991-1995 Plan:** No

Start Date: 1st qtr 92 **Completion Date:** Continuing

Program Description

Analytically and subjectively evaluate all corporate brands manufactured worldwide.

Importance to PM-USA

Program Benefits

Monitor subjective quality of corporate trademarks.

Program Leadership:

Functional Area Leaf **Department** Blending **Program Leader:** Heidsieck

Support Required From	1992 Man-Years	Leadership Dept. (92)
TT&G		1.0
R&D Analytical		

Capital Requirements (92) $ --- **1993-1996** $ --- **650 Timing** --

Program Milestones	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Report quarterly results to TTIG									Ongoing											

2022950097

11/15/91

Rating: B

1992 - 1996 Five-Year Plan

Program Summary

Program: Tobacco Particle Size Analysis for High Speed Makers

Category: Quality **Included in 1991-1995 Plan:** No

Start Date: 3rd qtr 92 **Completion Date:** 4th qtr 93

Program Description

Develop a methodology to determine the physical specifications of particle sizes that do contribute to filling power or firmness of cigarettes produced on the high speed makers.

Importance to PM-USA

Filling power improvement

Program Benefits

Knowledge of various particle sizes contribution at different mix levels and in different maker feed systems.

Program Leadership:

Functional Area Leaf **Department** Blending **Program Leader:** Jennings

Support Required From	1992 Man-Years	Leadership Dept. (92)
Engineering		0.3
Technical Services		

Capital Requirements (92) $ --- **1993-1996** $ --- **650 Timing** --

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Determine specification of contributing particles																				
Develop means of extracting from cig. production																				
Develop means of efficient usage of particles that do not contribute																				

2022950098

11/22/91

Rating: C

1992 - 1996 Five-Year Plan

Program Summary

Program: Lark Porous Combining Wrap

Category: Quality **Included In 1991-1995 Plan:** yes

Start Date: Ongoing **Completion Date:** 4th qtr 92

Program Description

Develop a hot-melt precoated porous combining wrap allowing reduction in ventilation variability
Coordinate efforts with vendors to develop desired porous combining wrap
With PM Engineering, develop a new hot-melt activation system
Develop new tipping adhesive technology

Importance to PM-USA

Currently, the Lark ventilation variability is excessive causing tar delivery to vary out of spec range. With current combining wrap, ventilation capability does not allow for increase in ventilation for lower tar deliveries on Lark brands.
With the new wrap, higher dilution levels can be obtained allowing lower tar deliveries in Lark brands

Program Benefits

Reduction in ventilation variability
Reduction in tar delivery variability
Increase in perceived consumer satisfaction

Program Leadership:

Functional Area R&D **Department** Filter Tech **Program Leader:** T. Callaham

Support Required From	1992 Man-Years	Leadership Dept. (92)
PM Engineering	0.2	1.0
QA	0.1	
Operations Services	0.1	
Manufacturing	0.1	
Purchasing	0.1	

Capital Requirements (92) $ none **1993-1996 $** none **650 Timing**

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Machinery conversion																				
Factory trials																				
Implementation																				

2022950099

11/22/91

Rating: C

1992 - 1996 Five-Year Plan

Program Summary

Program: Product and Processing Monitoring Technology

Category: Quality **Included in 1991-1995 Plan:** No

Start Date: 1st qtr 92 **Completion Date:** To be defined

Program Description

Develop and implement on-line sensor technology to quantify specific compounds on tobacco or ingredient formulations in PM-USA factories and processing plants.

Importance to PM-USA

Improve product consistency and process efficiency.

Program Benefits

Program Leadership:

Functional Area R&D **Department** **Program Leader:** T. Sanders

Support Required From	1992 Man-Years	Leadership Dept. (92)
		4.5

Capital Requirements (92) $ 00,000 **1993-1996** $ 00,000 **650 Timing**

Program Milestones	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Develop methodology for quantifying tobacco moisture levels in the field																				
Assess current needs/evaluate available technology																				
Implement developed tech to determine moisture levels in tobacco at point of purchase and throughout processing																				
Develop technology for other high priority applications as they are identified																				

2022950100

11/15/91

Rating: C

1992 - 1996 Five-Year Plan

Program Summary

Program: Blended Strips Reformulation

Category: Quality **Included In 1991-1995 Plan:** No

Start Date: 1st qtr 92 **Completion Date:** 1st qtr 94

Program Description

Transfer BBS blend formulas into whole unit blending for MZM. This requires modifications to 20 licensee or affiliate's corporate brands.

Importance to PM-USA

Blend uniformity and potential cost reduction.

Program Benefits

Program Leadership:

Functional Area Leaf **Department** Blending **Program Leader:** Heidsieck

Support Required From	1992 Man-Years	Leadership Dept. (92)
		0.1

Capital Requirements (92) $ --- **1993-1996** $ --- **650 Timing** --

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Change blends and get subjective approval							■													
Arrange whole unit blending to closely meet orders		■																		
Develop means of handling remnants effectively			■																	

2022950101

1992-1996 FIVE YEAR PLAN MAJOR PROGRAMS

Category: Safety Program Title	Functional Area	Department	Leader	Rating	Ref.
Environmental Health & Safety - Haz. Mate	Employee Relations	EH&S	S. Pouliot	A	F-1
Environmental Health & Safety - Training	Employee Relations	EH&S	S. Pouliot	A	F-2
Environmental Health & Safety - Ergonomic	Employee Relations	EH&S	S. Pouliot	A	F-3
Environmental Health & Safety - Audits	Employee Relations	EH&S	S. Pouliot	A	F-4

12/3/91

Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: Environmental Health & Safety - Hazardous Materials

Category: Safety **Included in 1991-1995 Plan:** Yes

Start Date: January, 1992 **Completion Date:** Ongoing

Program Description

Hazardous materials management has been an ongoing activity for the last ten years, resulting in the prevention of catastrophic losses and occupational injuries and illnesses. This program continues to integrate all the elements of a comprehensive management program including emergency planning, hazard communication, exposure monitoring and indoor air quality.

Importance to PM-USA

Prevention of injuries/illnesses
Regulatory compliance
Prevention of catastrophic losses

Program Benefits

Improved safety performance, reduced workers' compensation costs
Documented and tracked regulatory compliance
Prevention of business interruption due to catastrophic losses
Preparedness for emergency situations

Program Leadership: Employee Functional Area Relations **Department** EH&S **Program Leader:** S. Pouliot

Support Required From	1992 Man-Years	Leadership Dept. (92)
Facilities	1.0	3.0
Information Systems	0.5	

Capital Requirements (92) $ _____ **1993-1996 $** _____ **650 Timing** _____

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Update facility pre-plans																				
Conduct annual HAZWOPER refresher training																				
Assess exposure monitoring history by facility																				
Implement initial exposure monitoring schedule																				
Implement MSDS Image/Fax System for all employees																				
Conduct industrial hygiene investigation of all reported concerns and occupational illnesses																				

2022950103

12/13/91

Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: Environmental Health & Safety - Training

Category: Safety **Included In 1991-1995 Plan:** Yes

Start Date: January, 1992 **Completion Date:** Ongoing

Program Description

EH&S training to prevent injuries has been an on-going activity for many years, resulting in improved safety performance. This program builds upon these activities and formalizes EH&S training for prioritizing and allocating resources as well as for scheduling, tracking and reporting program effectiveness.

Importance to PM-USA

Prevention of injuries/illnesses
Regulatory compliance

Program Benefits

Improved safety performance, reduced worker's compensation costs
Documented and tracked regulatory compliance
Improved production and quality--tasks performed correctly first time

Program Leadership: Employee Relations **Functional Area** **Department** EH&S **Program Leader:** S. Pouliot

Support Required From	1992 Man-Years	Leadership Dept. (92)
Facilities	0.0	2.2
Information Systems	0.5	

Capital Requirements (92) $ **1993-1996 $** **650 Timing**

Program Milestones	1992 1 2 3 4	1993 1 2 3 4	1994 1 2 3 4	1995 1 2 3 4	1996 1 2 3 4
Continue existing training as req'd until pgm formalized					
Assess training needs and status by facility					
Identify total training requirements & resources for for PM USA					
Develop specific standardized training modules					
Develop formal schedule by facility based on priority					
Develop scheduling/tracking thru HRIS					
Assess job procedure status by facility					
Modify/integrate job procedures based on assessment					
Implement formal program					
Study feasibility of network image/fax system					

2022950104

12/3/91

Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: Environmental Health & Safety - Ergonomics (Human Factors)

Category: Safety **Included In 1991-1995 Plan:** Yes

Start Date: January, 1992 **Completion Date:** Ongoing

Program Description

Ergonomic reviews of the workplace have been conducted for the last ten years. Building upon these activities a formalized Ergonomics Program is being developed that will conform with guidelines proposed by OSHA. Program emphasizes: review and correction of current workplace and equipment design based on injury/illness analysis; development of equipment and layout ergonomic specifications for new/modified operations; employee involvement at all facilities.

Importance to PM-USA

Prevention of injuries/illnesses resulting from cumulative trauma and repetitive motion
Regulatory compliance
Redesign of workplace to compensate for aging workforce

Program Benefits

Improved safety performance, reduced workers' compensation costs
Documented and tracked regulatory compliance
Improved production and quality
Cost savings due to properly designed equipment and layouts (less need for retroactive fixes)

Program Leadership: Employee Relations **Department** EH & S **Program Leader:** S. Pouliot

Functional Area	1992 Man-Years	Leadership Dept. (92)
Facilities	0.5	2.5
Engineering	2.0	
Purchasing	0.2	

Capital Requirements (92) $ _____ **1993-1996** $ _____ **650 Timing** _____

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Analyze injury/illness data for trends, adjusting pgm as required																				
Finalize/distrubute compliance pgm document per OSHA guidelines																				
Establish Operational Ergonomics Teams for all facilities																				
Conduct training for all Engineering																				
Conduct special ergonomic evaluations of computer operations (Purchasing, IS)																				
Develop procedure for reporting and tracking program and results																				
Conduct general employee training																				
Develop machine design criteria																				
Implement machine design criteria with vendors																				

2022950105

12/3/91

Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: Environmental Health & Safety - Audits

Category: Safety **Included in 1991-1995 Plan:** Yes

Start Date: January, 1992 **Completion Date:** Ongoing

Program Description

EH&S audits have been an on-going activity for many years, resulting in improved safety performance and the prevention of catastrophic losses. This program builds upon these activities and formalizes EH&S audits for prioritizing and allocating resources, as well as for scheduling, tracking and reporting program effectiveness.

Importance to PM-USA

Prevention of injuries/illnesses
Regulatory compliance
Identification of potential catastrophic losses

Program Benefits

Improved safety performance, reduced workers' compensation costs
Documented and tracked regulatory compliance
Prevention of business interruption due to catastrophic losses

Program Leadership: Employee **Functional Area** Relations **Department** EH & S **Program Leader:** S. Pouliot

Support Required From	1992 Man-Years	Leadership Dept. (92)
Facilities	0.5	2.0
Information Systems	0.1	

Capital Requirements (92) $ _____ **1993-1996 $** _____ **650 Timing** _____

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Continue existing audits as req'd until pgm formalized																				
Purchase/install "Audit Master" software/hardware																				
Conduct initial audit of all facilities using "Audit Master"																				
Incorporate facility-specific elements to "Audit Master"																				
Develop procedure for reporting and tracking results																				
Develop formal schedule by facility																				
Implement formal program																				

2022950106

1992-1996 FIVE YEAR PLAN MAJOR PROGRAMS

Category: Environment

Program Title	Functional Area	Department	Leader	Rating	Ref.
Site Environ. Audits/Process Verification	Engineering	Env Compl/Eng	D. Merrill	A	G-1
Water Pollution	Engineering	Env Compl/Eng	D. Merrill	A	G-2
Air Pollution	Engineering	Env Compl/Eng	D. Merrill	A	G-3
Solid and Hazardous Waste	Engineering	Env Compl/Eng	D. Merrill	A	G-4
Incineration and Dryer Replacement - CHP	Mfg. Services	Col Heights Pckg	B. Roberts	B	G-5
Replace underground solvent tank - CHP	Mfg. Services	Col Heights Pckg	B. Roberts	B	G-6
Water Based Gravure Inks	Mfg. Services	PTS	C. Campbell	B	G-7
Packaging Materials Environmental Compli	Mfg. Services	Purchasing	Latshaw	B	G-8

11/22/91

Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: Site Environmental Audits and Process Verification

Category: Environmental Protection **Included in 1991-1995 Plan:** No

Start Date: 1st qtr 92 **Completion Date:** 4th qtr 94

Program Description

Verify, through environmental audits, compliance of all facilities with all applicable laws and regulations. Identify, through stack testing and process sampling, all regulated and permitted releases, quantify these values and establish a database for each facility.

Importance to PM-USA

Achieve compliance for each facility to all known federal, state and local regulations. Establish an information basis for a timely and orderly process of permitting and for focused programs to reduce pollutants at the source.

Program Benefits

Provides basis for permitting and programs to reduce pollutants at the source.

Program Leadership:

Functional Area Engineering **Department** Env Comp-Eng **Program Leader:** D. Merrill

Support Required From

Manufacturing

1992 Man-Years

Leadership Dept. (92)

Capital Requirements (92) $ - **1993-1996 $** - **650 Timing**

Program Milestones	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Environmental Audits:																				
- MC, Flavor Center, 20th Street, SS																				
- Park 500, Bermuda 100, PMF, LVL																				
- Cab, R&D, LPF, LVL (LMCP/Stemmery), Dock Street																				
Database releases of all facilities																				

11/22/91

Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: Water Pollution

Category: Environmental Protection **Included in 1991-1995 Plan:** Yes

Start Date: 1st qtr 92 **Completion Date:** 4th qtr 94

Program Description

Apply new technology to effectively reduce the amount of regulated water pollutants required by existing and anticipated regulations.

Importance to PM-USA

Potential environmental exposure exists regarding phosphorous (Park 500), nitrate/nitrogen (Park 500/BL), and nicotine (Bermuda 100) discharges.

Program Benefits

Minimize the Company's environmental risk associated with noncompliance.
Reduce the impact of regulatory compliance.

Program Leadership:

Functional Area Engineering **Department** Env Comp/Eng **Program Leader:** D. Merrill

Support Required From **1992 Man-Years** **Leadership Dept. (92)**

Manufacturing
R&D
Manufacturing Services
PM-Europe

Capital Requirements (92) $ 1,000,000 **1993-1996** $ 6 - 9,000,000 **650 Timing**

Program Milestones	1992 1 2 3 4	1993 1 2 3 4	1994 1 2 3 4	1995 1 2 3 4	1996 1 2 3 4
Test biological treatment pilot plant at Park 500					
Complete full scale chemical treatment plant at P500					
Complete design of stem wash water treatment plant at Park 500					
Construct plant. Concentrate stemwashing at P500					
Complete water column effluent treatment at B100					
Review stormwater permits for Park 500, MC, Cabarrus					
Renew waste water discharge permit for Park 500					

2022950109

11/15/91

Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: Air Pollution

Category: Environmental Protection **Included in 1991-1995 Plan:** Yes

Start Date: 1st qtr 92 **Completion Date:** 4th qtr 96

Program Description

Apply technology and changes to the process to effectively reduce the amount of regulated air pollutants required by existing and anticipated regulations Project Grain targets to reduce the alcohol content in Burley top by 100% and in aftercut by more than 30%. If successful, Project Grain will eliminate the need for VOC controls at the cigarette factories and 20th Street.

Importance to PM-USA

Particularly, VOC's (volatile organic compounds) are a major air pollution concern. Control of VOC's is a major regulatory priority. Tobacco itself is a source of VOCs, but flavors, humectants and especially alcohol are the major sources. Our manufacturing processes emit very large volumes of air with low concentrations fo VOC's. Thls creates enough VOC (by weight) to be an issue, but the low concentration makes treatment costly.

Program Benefits

Minimize the Company's environmental risk associated with noncompliance.
Reduce the impact of regulatory compliance.

Program Leadership:

Functional Area Engineering **Department** Env Comp/Eng **Program Leader:** D. Merrill

Support Required From	1992 Man-Years	Leadership Dept. (92)
Manufacturing		
R&D		

Capital Requirements (92) $ - **1993-1996** $ 28-72,000,000 **650 Timing**

Program Milestones	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Extend and complete stack testing for all facilities																				
Complete incinerator pilot testing (VOC/Ethanol)-MC/BL																				
Project Grain (100% alcohol reduction burley top,																				
more than 30% alcohol reduction in aftercut flavors)																				
VOC controls-CAB, LVL, MC (pending Project Grain)																				
VOC controls-S/S, 20th St. (pending Project Grain)																				
Install control tech at BL/LPF (ammonia, nicotine, VOC)																				
Evaluate effectiveness of Kabat at stemmeries																				
If Kabat unsuccessful, install stacks at Leaf Whses																				
Modify burners to reduce NOX emissions																				
Modify burley dryer exhausts to reduce nicotine emission																				
Obtain air permits - CAB, MC, NET																				

2022950110

11/22/91

Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: Solid and Hazardous Waste

Category: Environmental Protection **Included in 1991-1995 Plan:** Yes

Start Date: 1st qtr 92 **Completion Date:** 4th qtr 96

Program Description

Continue and extend recycling and source reduction programs to significantly reduce solid waste. Implement program to control the use and disposal of hazardous waste.

Importance to PM-USA

Landfills are filling up and waste disposal costs are increasing dramatically. Most states are legislating recycling to meet the national goal for reducing landfill disposal by 25% in 1992. A national goal of 50% reduction by the year 2000 is expected from the Resource Conservation and Recovery Act (RCRA) reauthorization, scheduled in Congress in 1992, to control the use and disposal of hazardous waste to manage potential liabilities and avoid the necessity of regulation and permit requirements.

Program Benefits

Achieve, in 1995, PM's recycle potential of 65% for mixed waste and 50% for process waste. In the past, before the Richmond recycling programs started, 16% of mixed waste and 3% of process waste was recycled.

Program Leadership:

Functional Area Engineering **Department** Env Comp/Eng **Program Leader:** D. Merrill

Support Required From	1992 Man-Years	Leadership Dept. (92)
Manufacturing		
Purchasing		
R&D		

Capital Requirements (92) $ - **1993-1996** $ 3 - 4,000,000 **650 Timing**

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Implement solid waste recycling programs at Cabarrus and Louisville																				
Install drying technology to reduce sludge at Park 500																				
Continue regular audits of hazardous waste disposal sites																				
Audit use and disposal plans of hazardous materials at all facilities and laboratories																				
Coordinate with Pm Europe programs on environmentally friendly packaging																				

2022950111

12/9/91

Rating: B

1992 - 1996 Five-Year Plan

Program Summary

Program: CHP - Incinerator and Rotomec Dryer Replacement

Category: Environmental Protection **Included in 1991-1995 Plan:** Yes

Start Date: 3rd Quarter 1991 **Completion Date:** 1st Quarter 1992

Program Description

This project provides for the purchase and installation of a 100,000 SCFM regenerative thermal oxidizer to incinerate solvent fumes from the presses and within the plant. Incineration efficiency will be 98%. Replacement of the Rotomec Dryers will increase solvent capture at press side.

Importance to PM-USA

This project will bring Colonical Heights Packaging into compliance within environmental regulations.

Program Benefits

The new dryers will enable the Rotomec Press to run water-based inks. This project will bring Colonial Heights Packaging into compliance with environmental regulations and with the Consent Agreement concerning VOC emissions.

Program Leadership:

Functional Area Manufacturing Svcs **Department** CHP **Program Leader:** B. Roberts

Support Required From	1992 Man-Years	Leadership Dept. (92)
Environmental Eng.		0.1

Capital Requirements (92) $ 4,946,400 **1993-1996 $** 000,000 **650 Timing**

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Installation - 3rd/4th quarter 1991																				
Start-up - Scheduled 4th quarter 1991																				
Compliance testing - 1st quarter 1992																				

20229501 12

12/9/91

Rating: B

1992 - 1996 Five-Year Plan

Program Summary

Program: CHP - replacement of underground solvent storage tanks

Category: Environmental Protection **Included in 1991-1995 Plan:** Yes

Start Date: 3rd quarter 1991 **Completion Date:** 1st quarter 1993

Program Description

Current underground storage tank regulations (State and Federal) require extensive and elaborate monitoring procedures. To comply with these regulations, CHP will replace the underground tanks with an aboveground tank farm.

Importance to PM-USA

Comply with existing and future UST regulations.

Program Benefits

Replacement of the underground tanks with above ground tanks is believed to be the most economical and environmentally safe way to comply with existing and future UST regulations.

Program Leadership:

Functional Area Manufacturing Svcs **Department** CHP **Program Leader:** B. Roberts

Support Required From	1992 Man-Years	Leadership Dept. (92)
Environmental Eng.		0.1

Capital Requirements (92) $ 485,000 **1993-1996** $ 000,000 **650 Timing** '91

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Develop and submit 650 - 3rd qtr 91																				
650 approval																				
Bid and award contract																				
Install and commission																				
Remove underground tanks																				

2022950113

12/12/91

Rating: B

1992 - 1996 Five-Year Plan

Program Summary

Program: Water Based Gravure Inks

Category: Environmental Protection **Included in 1991-1995 Plan:** No

Start Date: 4th qtr 91 **Completion Date:** 4th qtr 92

Program Description

Convert PM packaging and tipping inks to water-based systems.

Importance to PM-USA

- Reduce/eliminate product contamination risks from freshly printed materials.
- Facilitate fast-flow delivery.
- Facilitate suppliers' compliance with tightening emission standards.

Program Benefits

- Reduce off-press solvents to acceptable level.
- Environmentally pro-active action to reduce solvent volume used by suppliers.

Program Leadership:

Functional Area Manufacturing Svcs **Department** PTS **Program Leader:** Mgr, PTS

Support Required From	1992 Man-Years	Leadership Dept. (92)
R&D		0.0
QA		
Technical Services		
Manufacturing		
NY Packaging		

Capital Requirements (92) $ unknown **1993-1996** $ unknown **650 Timing** n/a

Program Milestones	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Define plan to develop/implement - 4th qtr 91																				
Finalize plan and begin implementation																				
Have one major color/brand family converted																				

20222950114

12/12/91

Rating: B

1992 - 1996 Five-Year Plan

Program Summary

Program: Packaging Materials Environmental Compliance

Category: Environmental Protection **Included in 1991-1995 Plan:** Yes

Start Date: 2nd Qtr. 1990 **Completion Date:** Continuous

Program Description

Develop/locate new/modified packaging materials for offensive or defensive implementation in response to evolving environmental-related consumer expectations and legislative requirements. Current efforts include 1) B&H DUL FT blank foil elimination, 2) clean re-cycled paper/board, 3) source reduction, 4) foil free innerliner and 5) components screening.

Importance to PM-USA

- Environmental regulatory compliance.
- Customer perceptions/exceptations.

This program is closely related to, and will utilize the experise developed in PM-Europe that was part of their emphasis on the environment.

Program Benefits

Environmental concerns have accelerated in recent years.
Development of this program is critical to addressing this issue.

Program Leadership:

Functional Area Mfg Services **Department** Purchasing **Program Leader:** Latshaw

Support Required From	1992 Man-Years	Leadership Dept. (92)
R&D	1.0	1.0
Tech. Services		
QA		
Engineering		

Capital Requirements (92) $ 0,000 **1993-1996** $ 00,000 **650 Timing** n/a

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Develop B&H foil alternative																				
Investigate water based inks																				
Implement one water based color																				

2022950115

1992-1996 FIVE YEAR PLAN MAJOR PROGRAMS

Category: Organization Health

Program Title	Functional Area	Department	Leader	Rating	Ref.
Supervisory Training	Employee Relations	Training	A. Dixon	A	H-1
Operator/Mechanic Skills Gap Training	Employee Relations	Training	A. Dixon	A	H-2
Crafts Skills Training	Employee Relations	Training	A. Dixon	A	H-3
Training Instructors	Employee Relations	Training	A. Dixon	A	H-4
Systems Approach to Training	Employee Relations	Training	A. Dixon	A	H-5
Operator/Mechanic Training - Troubleshoot	Employee Relations	Training	A. Dixon	A	H-6
Louisville Skills Training Program	LVL ER	Training	W. Ham	A	H-7
Minority Business Development Acceleratio	Mfg. Services	Minority Bus.	Kosakowski	A	H-8

12/3/91

Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: Supervisory Training

Category: Organizational Health **Included In 1991-1995 Plan:** No

Start Date: 3rd Qtr 91 **Completion Date:** Ongoing

Program Description

Program will determine current skill needs of supervisors, as well as skills needed in the future to realize the Manufacturing work force vision and goal. Program provides for the modification of training in all locations to ensure that core skills as identified by job analysis are included. Program also provides for the development of a supervisor career progression ladder.

Importance to PM-USA

Increased technological complexity in the workplace and the need for additional analytical skills have created new challenges for manufacturing. Additionally, increased regulations have created a need for knowledge in new areas such as OSHA, Affirmative Action, substance abuse, etc. Supervisors also have indicated a need for non-technical, human relations skills.

Program Benefits

- o Enhanced technical skills
- o Regulatory compliance
- o Increased ability to handle human relations issues
- o Improved selection and retention

Program Leadership: Employee Relations **Functional Area** **Department** Training **Program Leader:** A. Dixon

Support Required From	1992 Man-Years	Leadership Dept. (92)
MMTIP II	TBD	TBD
Plant Mgt	TBD	
Training Mgt	TBD	
ERO	TBD	
OMD	TBD	

Capital Requirements (92) $ **1993-1996 $** **650 Timing**

Program Milestones	1992 1 2 3 4	1993 1 2 3 4	1994 1 2 3 4	1995 1 2 3 4	1996 1 2 3 4
Conduct job analysis at M/C and Cabarrus					
Assess applicability to other locations					
Pursue proposed skills assessment					
Develop and implement career progression ladder (M/C)					
Modify/implement ladder at other locations					
Assess existing training programs					
Develop/modify training programs					

2022950117

12/3/91

Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: Operator/Mechanic Training

Category: Organizational Health **Included in 1991-1995 Plan:** No

Start Date: December, 1991 **Completion Date:** Ongoing

Program Description

Program will determine current skill needs of operator/mechanics and use the knowledge gained to modify selection and training programs to address those skill needs. Program will ensure that major machinery programs include core areas such as task, quality, and organizational skills, etc. Program also calls for the development and implementation of instruction in the concepts of communications and teamwork.

Importance to PM-USA

Program is designed to increase the technical and non-technical skills of operators/mechanics in order to improve performance in the areas of safety, quality, productivity and cost.

Program Benefits

- o Reduced downtime
- o Improved productivity
- o Better quality

Program Leadership: Employee Relations **Department** Training **Program Leader:** A. Dixon

Support Required From	1992 Man-Years	Leadership Dept. (92)
Plant Managers	TBD	TBD
Training Managers	TBD	TBD
OMD	TBD	TBD
Labor Relations	TBD	TBD
Cabarrus Expansion Team	TBD	TBD

Capital Requirements (92) $ _____ **1993-1996 $** _____ **650 Timing** _____

Program Milestones

	1992 1 2 3 4	1993 1 2 3 4	1994 1 2 3 4	1995 1 2 3 4	1996 1 2 3 4
Conduct job analysis in Richmond and Cabarrus					
Assess Richmond results for applicability to Louisville					
Assess skill levels of personnel in Richmond					
Assess existing training programs					
Develop/modify training programs					
Develop a selection system, internal and external, that optimizes employee job/skills match					
Research existing communication skill courses					
Begin communication/teamwork training					

2022950118

12/3/91

Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: Craft Skills Training

Category: Organizational Health **Included in 1991-1995 Plan:** No

Start Date: 1st Qtr 92 **Completion Date:** Ongoing

Program Description

Program calls for determining and addressing current skill needs of crafts as well as skills needed in the future to realize the manufacturing work force vision and goal; utilizing NOCTI (or other tool) to determine skill levels of existing craft employees and for new-hire selection; and pursuing competency-based evaluations for major machinery courses.

Importance to PM-USA

Provides a method of determining employee skill levels in order to train present employees or select (upon hire) those applicants who meet our standards.

Program Benefits

- o Better trained craft employees
- o Less downtime
- o Improved product quality.

Program Leadership: **Functional Area** Employee Relations **Department** Training **Program Leader:** A. Dixon

Support Required From	1992 Man-Years	Leadership Dept. (92)
Plant Mgrs	TBD	TBD
Training Mgrs	TBD	
Labor Relations	TBD	
OMD	TBD	

Capital Requirements (92) $ _____ **1993-1996 $** _____ **650 Timing** _____

Program Milestones	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Conduct job analysis in Richmond and Cabarrus																				
Assess Richmond results for applicability to Louisville																				
Assess Louisville and Cabarrus skill levels																				
Assess existing training programs																				
Develop/modify training programs																				
Selectively schedule personnel based on individual needs																				
Pursue competency-based evaluations																				

12/3/91

Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: Training Instructors

Category: Organizational Health **Included in 1991-1995 Plan:** No

Start Date: 1st Qtr 92 **Completion Date:** Ongoing

Program Description

Program will promote the development of professional and subject-matter expertise through the use of instructor cross-functional rotation, career progression, and on-the-job follow-up and customer interface. Program provides for evaluation of training center organization and job structures and establishment of system to provide for the proper allocation of limited instructor resources.

Importance to PM-USA

Assures needed quantity and quality of instructor resources.

Program Benefits

- o Increased quality of training
- o Increased instructor professionalism, esteem, and credibility
- o Improved training resource management

Program Leadership:

Functional Area Employee Relations **Department** Training **Program Leader:** A. Dixon

Support Required From	1992 Man-Years	Leadership Dept. (92)
Training Managers	TBD	TBD
Plant Managers	TBD	
OMD	TBD	
Cabarrus Expansion	TBD	

Capital Requirements (92) $ _____ **1993-1996 $** _____ **650 Timing** _____

Program Milestones	1992 1 2 3 4	1993 1 2 3 4	1994 1 2 3 4	1995 1 2 3 4	1996 1 2 3 4
Evaluate/implement career progression ladder	▒▒				
Define approach for incorporating more on-the-job follow-up in instructors' jobs	▒				
Establish cross-functional rotation system	▒				
Evaluate training center organization and job structures	▒				
Establish system to provide for proper allocation of training resources during Cabarrus expansion	▒▒	▒			
Develop approach for meeting demands for training resources when demand exceeds supply	▒				

2022950120

12/3/91

Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: Systems Approach to Training

Category: Organizational Health **Included in 1991-1995 Plan:** No

Start Date: 1st Qtr 92 **Completion Date:** Ongoing

Program Description

The Systems Approach to Training (SAT) is a widely recognized, systematic process for producing consistently superior training. The approach encompasses all aspects of the training development process: analysis, design, development, implementation, evaluation, and sustainment. This program will be implemented in training centers at Richmond, Louisville, and Cabarrus.

Importance to PM-USA

Experience of other industry and military indicates that the proper use of SAT can ensure a fair return on training investments. The need for cost-effective training continues to increase. SAT offers the means to accomplish this training.

Program Benefits

- o Improved safety
- o Improved quality
- o Enhanced productivity
- o Reduced cost

Program Leadership:

Functional Area _____ **Department** _____ **Program Leader:** _____

Support Required From	1992 Man-Years	Leadership Dept. (92)
Training Managers	TBD	TBD
Manufacturing Training Development	TBD	TBD

Capital Requirements (92) $ _____ **1993-1996 $** _____ **650 Timing** _____

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Facilitate understanding of SAT																				
Identify SAT Coordinator																				
Develop SAT model																				
Develop implementation plan																				
Carry out plan																				

12/13/91

Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: Troubleshooting Training Program

Category: Organizational Health **Included in 1991-1995 Plan:** No

Start Date: 2nd Qtr 91 **Completion Date:** Ongoing

Program Description

Prototype program being developed for supervisors/operators/mechanics/instrument electricians. Initial focus is on the G.D X-2/G.D X-2 NV packer because it is common to all manufacturing plants. Goal eventually is to expand program to cover all major cigarette manufacturing machinery. Program being modelled after a proven U.S. Air Force approach. Approach provides for both the development of the necessary knowledge base and related critical thinking skills.

Importance to PM-USA

Troubleshooting is a widely recognized training need. This need is reflected in workplace performance as well as training survey data. Meeting this need is critical if safety, quality, productivity, and cost objectives are to be achieved.

Program Benefits

- o Reduced downtime
- o Improved production
- o Lower reject percentages
- o Lower maintenance costs

Program Leadership:

Functional Area Employee Relations **Department** Training **Program Leader:** A. Dixon

Support Required From	1992 Man-Years	Leadership Dept. (92)
Plant Managers	TBD	TBD
Training Managers	TBD	TBD

Capital Requirements (92) $ _____ **1993-1996 $** _____ **650 Timing** _____

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Develop prototype X-2 programs																				
Conduct pilot test and modify training appropriately																				
Complete X-2 training																				
Expand to other equipment based on problems/opportunities identified in pilot test																				

2022950122

12/3/91

Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: Louisville Skills Enhancement Training Program

Category: Organizational Health **Included in 1991-1995 Plan:** No

Start Date: 3rd Qtr 91 **Completion Date:** Ongoing

Program Description

Prototype program designed to supplement skills and knowledge of existing hourly and supervisory personnel and to allow for the assessment of associated costs and benefits. Long-term goal of the program is to improve the cost-effectiveness of training across all locations.

Importance to PM-USA

Program provides for improved understanding of the costs and benefits of select training programs and methods. As a result, it carries implications for training across all manufacturing training locations. Follow-on efforts are expected which seek to further enhance payoffs and reduce costs.

Program Benefits

- o Improved employee job satisfaction
- o Improved production
- o Improved quality
- o Reduced downtime
- o Reduced cost

Program Leadership: Lvl Plant and Training Mgt **Department** _____ **Program Leader:** W.S. Ham

Support Required From	1992 Man-Years	Leadership Dept. (92)
Manuf. Training Development.	TBD	TBD
Plant Managers	TBD	TBD
Training Managers	TBD	TBD

Capital Requirements (92) $ _____ **1993-1996 $** _____ **650 Timing** _____

Program Milestones	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Develop programs																				
Conduct pilot test																				
Expand based on pilot results																				

12/12/91

Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: Minority Business Development Acceleration Project

Category: Organizational Health **Included in 1991-1995 Plan:** Yes

Start Date: 4th Qtr. 1991 **Completion Date:** 1st Qtr. 1993

Program Description

Implement an aggressive purchasing and minority business support program beyond present levels to increase participation by minority businesses in supplying goods and services.
MRO Purchasing has established a Task Force of Purchasing Agents to assist in this effort.

Importance to PM-USA

With growing restrictions on mass media advertising, Marketing is increasing direct customer contact through sampling, point of purchase, direct customer promotions, etc. The minority community is a large customer base and massive goodwill makes a receptive audience for direct marketing. MBD is part of that "good will". Progress must also be actual and visible to avoid government and advocacy group interference.

Program Benefits

Minority business development is important both for "good will," marketing programs, and governmental regulations.

Program Leadership:

Functional Area Mfg Services **Department** Minority Bus. **Program Leader:** Kosakowski

Support Required From	1992 Man-Years	Leadership Dept. (92)
All Departments	0.75	0.5

Capital Requirements (92) $ 00,000 **1993-1996** $ 000,000 **650 Timing** n/a

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Task force identified and implemented (3rd Qtr 91)																				
Task force plan submitted to Exec. Comm. (4th Qtr 91)																				
Approved Plan introduced to Plants and Depts.																				
Expanded Program implemented and results evaluated																				

2022950124

1992-1996 FIVE YEAR PLAN MAJOR PROGRAMS

Category: Product Development

Program Title	Functional Area	Department	Leader	Rating	Ref.
Full Margin Brand Extensions Domestic	R&D	Cig. Developmt	C. Altizer	A	I-1
Export	R&D	Exp Prod Dev	J. Smith	A	I-2
US Marlboro Development	Leaf	Blending	R. Keatts	A	I-3
Packaging Innovation	Engineering	Mach Des Eng	E. Woolridge	A	I-4
Project Tomorrow	R&D	Proj Tommorow	B. Dwyer	A	I-5
Lotus and Ambrosia	R&D	Paper Dev	T. Sanders	A	I-6
Beta	R&D	Prod Dev	C. Lilly	A	I-7
DeNic/HalfNic	R&D	Flavor Tech	G. Yatrakis	A	I-8
Japan Marlboro Development 85/100mm	Leaf	Blending	C. Brumberg	B	I-9
Product Development - Asia	Leaf	Blending	B. Scott	B	I-10
Product Development - Latin America	Leaf	Blending	B. Scott	B	I-11
Web Filter Program	R&D	Product Dev	D. Heretick	B	I-12
Ingredients Reduction	R&D	Flavor Tech	F. Daylor	B	I-13
Reduction - Mainstream CO	R&D	Product Dev	J. Whidby	B	I-14
Sidestream Gas Phase Reduction	R&D	Product Dev	J. Whidby	B	I-15
Aerosol Research	R&D	Product Dev	J. Whidby	B	I-16
Natural Flavors	R&D	Product Dev	C. Ellis	C	I-17

11/22/91

Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: Full Margin Brand Line Extension Domestic Market

Category: Product Development **Included in 1991-1995 Plan:** Yes

Start Date: Ongoing **Completion Date:** 2nd qtr 92

Program Description

Merit Ultima: Develop best of lowest 1 mg King Size and 2 mg 100's
Marlboro Medium 100's: Develop 100 mm line extension of Marlboro Medium in box and soft pack
B&H King Size: Develop king size full flavor reg and menthol and lights reg and menthol for B&H family
VA Slims KS: Develop KS line extension in full flavor and lts reg and menthol for VA Slims family
Parliament Lts Men: Develop Parl Lts Men for Region I launch in KS Box, 10's Box, 100's SP
9 mg Superslims: Develop with low sidestream paper offering 70% visibility reduction in reg and men

Importance to PM-USA

Increase our full margin business through line extensions of existing brands.
PM USA's strategy for introducing new line extensions of existing brands is based on either: 1) the development of products in areas in which we are under-represented; 2) filling a new niche; or 3) gaining market share by cutting into market share of a competitor's brand. All of the products planned for 1992 fit into one of these three categories.

Program Benefits

Unknown - estimated volume increase equivalent to about 1 market share of full margin new business.

Functional Area R&D **Department** Cig Dev. **Program Leader:** C. Altizer

Support Required From	1992 Man-Years	Leadership Dept. (92)
Operations Services	2.0	15.0
Engineering	0.5	
Leaf	0.2	
Purchasing	0.1	

Capital Requirements (92) $ none **1993-1996 $** none **650 Timing**

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Merit Ultima Launch																				
Marlboro Medium 100 Launch																				
B&H KS Regional Launch																				
B&H KS National Launch																				
Virginia Slims KS Launch																				
Parliament Lights Menthol Launch																				
9 mg Superslims consumer test																				

11/22/91

Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: New Products for the Export Market

Category: Product Development **Included in 1991-1995 Plan:** Yes

Start Date: Continuous **Completion Date:** 4th qtr 92

Program Description

Develop new brands and line extensions which satisfy regional launch plans as well as operations' capabilities and efforts of consolidation.
Coordinate entire brand introduction process from initial concept to launch.
Ensure all launch dates are met in a timely fashion with a minimum of disruption to operations.

Importance to PM-USA

Increase sales volume and market share in existing markets and those underrepresented by PM.
Increase unit sales of Philip Morris worldwide.

Program Benefits

Unknown, but estimated. Total export volume increases of greater than 50 billion units by 1996.
Intangible: Maximize utilization of assets.

Program Leadership:

Functional Area R&D **Department** Exp Prod Dev **Program Leader:** J. Smith

Support Required From	1992 Man-Years	Leadership Dept. (92)
Technical Services		11.5
Manufacturing		

Capital Requirements (92) $ _____ **1993-1996 $** _____ **650 Timing** _____

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Export products launches:																				
Japan - 4 launches	■	■	■																	
Hong Kong - 3 launches			■																	
Korea - 3 launches			■	■																
Taiwan - 1 launch				■																
Singapore - 3 launches		■	■																	
PRC - 1 launch		■																		
GCC - 2 launches			■																	
Thailand, SGP, JPN, & HK - 1 launch			■																	
Details are available.																				

2022950127

11/15/91

Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: US Marlboro Development

Category: Product Development **Included in 1991-1995 Plan:** No

Start Date: 1st qtr 1992 **Completion Date:** 2nd qtr 1992

Program Description

Modify current U.S. Marlboro blend to account for decreasing availability of tips. The recommended blend, equivalent subjectively to our current blend, would compensate for the higher amount of center stalk leaf produced at the expense of tips, balance the net contribution of bright and burley by modifying the ET blend and increasing ET inclusion by 1 to 2%, maintain the subjective impact of RCB and require 1% less scrap material.

Importance to PM-USA

For our full margin products, the bright and burley blends incorporate a higher share of tips than produced in a given tobacco crop. Purchase of the required amount of tips becomes more difficult in view of PM USA's increasing production, the growing PM International demand for tips and changes in cultural practices, resulting in decreasing tip volumes (mainly burley).

Program Benefits

Maintain product quality

Program Leadership:

Functional Area Leaf **Department** Blending **Program Leader:** R. Keatts

Support Required From	1992 Man-Years	Leadership Dept. (92)
R&D (Product Development)		0.5

Capital Requirements (92) $ --- **1993-1996 $** --- **650 Timing** --

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
ET blend																				
Strip blend																				
Complete formulation																				
Internal panel and POL testing																				

202295012B

11/22/91

Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: Packaging Innovation

Category: Product Development **Included in 1991-1995 Plan:** Yes

Start Date: Ongoing **Completion Date:** 1st qtr 93

Program Description

Supply packing equipment capability to support new product introductions and promotions.

Importance to PM-USA

Support timely introduction of new products.

Program Benefits

Program Leadership:

Functional Area Engineering **Department** Mach Des Eng **Program Leader:** E. Woolridge

Support Required From	1992 Man-Years	Leadership Dept. (92)
Manufacturing		3.3
Manufacturing Services		

Capital Requirements (92) $ 2,500,000 **1993-1996 $** _____ **650 Timing** _____

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Mettalized outerwrap																				
1 x 5 horizontal carton design																				
1 x 5 FTB carton design (Lark)																				
Multi fold pack coupon application																				
Off-line carton insert equipment at PreCon																				
Incorporate coupon integral to flip top box blank (Project currently on hold pending availability of appropriate packer. Targeted completion year is 1993.)																				

2022950129

11/22/91

Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: Project Tomorrow

Category: Product Development **Included in 1991-1995 Plan:** Yes

Start Date: 1 qtr 91 **Completion Date:** 4 qtr 93

Program Description

Evaluate the feasibility of developing an ignition-propensity test for cigarettes.
Evaluate the technical and commercial feasibility of making cigarettes with reduced ignition propensities with respect to such as test.

Importance to PM-USA

The Fire Safety Cigarette Act, signed into law on August 10, 1990, empowers the Consumer Product Safety Commission (CPSC) to complete research on cigarette fire safety. The CPSC must deliver its final report to Congress by August 1993. This includes a standard method for determining ignition propensity, ignition performance data for cigarettes and computer modeling of ignition physics. We need to evaluate our ability to manufacturing products with reduced ignition propensities regarding the proposed standard method.

Program Benefits

Meet potential government regulations regarding cigarette fire safety.

Program Leadership:

Functional Area R&D **Department** Proj Tomorrow **Program Leader:** B. Dwyer

Support Required From	1992 Man-Years	Leadership Dept. (92)
Engineering	3.0	21.5
Operations Services	0.2	

Capital Requirements (92) $ unknown **1993-1996** $ unknown **650 Timing**

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Develop test for ignition propensities																				
Develop computer model for ign. physics																				
Determine and initiate commercialization of most promising banded paper technology																				
Design, produce and evaluate low-MRB versions of all PM cigarettes																				
More specific milestones are available.																				

2022950130

12/12/91

Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: Lotus and Ambrosia

Category: Product Development **Included in 1991-1995 Plan:** Yes

Start Date: Ongoing **Completion Date:** 2nd qtr 93

Program Description

Develop a subjectively acceptable full circumference cigarette with about a 70% reduction in visible sidestream smoke by 1993 (Lotus).

Develop flavor-release compounds which can be applied to cigarette paper to give either a distinctive sidestream aroma or a reduction in sidestream odor and/or irritation with minimal effect on mainstream subjectives by 1993 (Ambrosia).

Importance to PM-USA

Smoking restrictions continue to increase. These restrictions clearly have a negative affect on cigarette sales. The three most obvious cues for non-smokers are visible sidestream smoke, sidestream odor, and irritation caused by sidestream smoke. Competitor activities continue in the area of developing low sidestream products with particular activity from RJ Reynolds. Repeated evaluations of low sidestream protos have deomstrated that not only do some of these models reduce visible sidestream smoke, they also reduce room irritation due to sidestream smoke.

Program Benefits

Unknown, but estimated. The development of this technology can provide PM USA with one or more line extensions of its full margin brands leading to potentially increased full margin business.

Program Leadership:

Functional Area R&D **Department** Paper Dev **Program Leader:** T. Sanders

Support Required From	1992 Man-Years	Leadership Dept. (92)
Technical Services	0.1	13.5
Engineering	1.0	
QA	0.1	

Capital Requirements (92) $ none **1993-1996** $ unknown **650 Timing**

Program Milestones	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Lotus					■															
Ambrosia					■															
Specific milestones are available																				

20229501131

11/15/91

Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: Beta

Category: Product Development **Included In 1991-1995 Plan:** Yes

Start Date: **Completion Date:** 4th qtr 95

Program Description

Develop a new smoking article for test market in 1995.

Importance to PM-USA

Product has potential to supplement sale of full margin brands in the last half of the 1990's.

Program Benefits

Program Leadership:

Functional Area R&D **Department** Phys. Res. **Program Leader:** B. Losee

Support Required From	1992 Man-Years	Leadership Dept. (92)
		24.0

Capital Requirements (92) $ **1993-1996 $** **650 Timing**

Program Milestones	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Complete proof-of-concept studies - 4th qtr 91																				
Develop/Test 1st generation commercial prototype			■																	
Define/Specify 1st generation product							■													
Pilot scale production operational for test market quantities															■					

20229501 32

12/12/91 Rating: A

1992 - 1996 Five-Year Plan

Program Summary

Program: De-nic/Half-nic

Category: Product Development **Included In 1991-1995 Plan:** Yes

Start Date: 3rd qtr 91 **Completion Date:** 4th qtr 92

Program Description

Develop a 100 mm, 9 mg cigarette with 0.3 mg (half-nic) nicotine delivery with subjectives equal to a 0.6 mg nicotine delivery product. Continue research to develop methods to evaluate potential new cigarette additives, which will mimic the subjective effects of nicotine.

Importance to PM-USA

Utilize state-of-the-art technology to provide products that offer PM-USA a competitive advantage and consumer benefits.

Program Benefits

Measurable: Develop a new market segment.
Intangible: Perceived consumer benefits.

Program Leadership:

Functional Area R&D **Department** Applied Res. Flavor Tech. **Program Leader:** R. Carchman G. Yatrakis

Support Required From	1992 Man-Years	Leadership Dept. (92)
Cigarette Testing		7.5 (Research)
QA		3.0 (Half-nic)
Processing Plants	half-nic	
Technical Services		
Manufacturing		

Capital Requirements (92) $ none **1993-1996 $** none **650 Timing**

Program Milestones		1992 1 2 3 4	1993 1 2 3 4	1994 1 2 3 4	1995 1 2 3 4	1996 1 2 3 4
Half-Nic:						
Extraction/Processing	3Q91					
Filler Additives	4Q91					
Subjectives	3Q91					
Filter/Paper Development	4Q91					
Casing Flavor Development	4Q91					
Models for Internal Panels	4Q91					
Preparation for POL's						
Research - Lab screening methods to evaluate potential cigarette additives						

2022950133

11/15/91

Rating: B

1992 - 1996 Five-Year Plan

Program Summary

Program: Japan Marlboro Development 85/100mm

Category: Product Development **Included In 1991-1995 Plan:** No

Start Date: 3rd/4th qtr 92 **Completion Date:** 1st qtr 93

Program Description

Develop cigarette blend to qualify as Marlboro subjectively and have a density and burn rate allowing 14 mgs delivery with acceptable puff count.

Importance to PM-USA

Increase competitiveness of Marlboro in Japan made under a licensee agreement with JTI.

Program Benefits

Program Leadership:

Functional Area Leaf **Department** Blending **Program Leader:** Brumberg

Support Required From	1992 Man-Years	Leadership Dept. (92)
R&D (Product Development)		0.5

Capital Requirements (92) $ --- **1993-1996** $ --- **650 Timing** --

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Negotiate use of ET and increased usage of offshore tobaccos in Marlboro KS																				
Develop 100mm product																				

2022950134

11/15/91

Rating: B

1992 - 1996 Five-Year Plan

Program Summary

Program: Product Development - Asia

Category: Product Development **Included In 1991-1995 Plan:** No

Start Date: 1st qtr 92 **Completion Date:** 4th qtr 93

Program Description

To develop new products and to improve existing products for the Asian countries listed.

Importance to PM-USA

Program Benefits

Potential to increase market share in area countries.

Program Leadership:

Functional Area Leaf **Department** Blending **Program Leader:** Brad Scott

Support Required From	1992 Man-Years	Leadership Dept. (92)
R&D (Product Development)		0.3

Capital Requirements (92) $ --- **1993-1996** $ --- **650 Timing** ---

Program Milestones	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Philippines:																				
1. Marlboro improvement (2 steps)																				
Step 1																				
Step 2																				
Malaysia																				
1. Corporate product to compete in price level below Marlboro																				
Indonesia:																				
1. Develop full flavor product																				

2022950135

11/15/91

Rating: B

1992 - 1996 Five-Year Plan

Program Summary

Program: Product Development - Latin America

Category: Product Development **Included in 1991-1995 Plan:** No

Start Date: 1st qtr 92 **Completion Date:** 4th qtr 93

Program Description

To develop new products and to improve existing products for the Latin America countries listed.

Importance to PM-USA

Program Benefits

Potential to increase market share in area countries.

Program Leadership:

Functional Area Leaf **Department** Blending **Program Leader:** Brad Scott

Support Required From	1992 Man-Years	Leadership Dept. (92)
R&D (Product Development)		0.9

Capital Requirements (92) $ --- **1993-1996** $ --- **650 Timing** --

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Brazil:																				
1. Marlboro improvement program																				
2. L&M improvement program																				
3. Develop a 6-8 mg cigarette to compete with BAT's Free without ET or sheet																				
4. Develop standardized packing grades																				
Guatemala:																				
1. Menthol product targeted against Kool																				
2. Lights product for high price segment																				
3. Product for premium price segment																				
4. Reduced delivery product for premium price segment																				

2022950136

11/15/91

Rating: B

1992 - 1996 Five-Year Plan

Program Summary

Program: Product Development - Latin America (continued)

Category: _____ **Included in 1991-1995 Plan:** _____

Start Date: _____ **Completion Date:** _____

Program Description

Importance to PM-USA

Program Benefits

Program Leadership:

Functional Area _____ **Department** _____ **Program Leader:** _____

Support Required From	1992 Man-Years	Leadership Dept. (92)
		0.0

Capital Requirements (92) $ --- **1993-1996** $ --- **650 Timing** ---

Program Milestones	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Mexico:																				
1. Develop product for the medium price segment																				
2. Merit type																				
3. Determine off-shore tobacco requirements and usage for corporate brands																				
Panama:																				
1. Menthol product targeted against Kool																				
2. Develop flue-cured purchase program																				

2022950137

11/22/91

Rating: B

1992 - 1996 Five-Year Plan

Program Summary

Program: Web Filter Program

Category: Product Development **Included in 1991-1995 Plan:** Yes

Start Date: Ongoing **Completion Date:** 3rd qtr 92

Program Description

Develop cigarette filtration systems which offer the consumer perceived benefits when incorporated into new cigarette products. Develop a non-woven wet-laid sheet structure of cellulose acetate and cellulosic fibers. Develop additives and additive application systems to modify the filtration and/or subjective performance of filter media. Develop cellulose or cellulose acetate modification processes to provide filtration and/or subjective performance advantages for new products. Develop mfg operations to produce filters from new filter media.

Importance to PM-USA

New filter products which will improve the taste of ultra-low tar cigarettes.
Potential competitive advantage.

Program Benefits

Program Leadership:

Functional Area R&D **Department** Filter Dev **Program Leader:** T. Callaham

Support Required From	1992 Man-Years	Leadership Dept. (92)
		4.5

Capital Requirements (92) $ unknown **1993-1996** $ unknown **650 Timing**

Program Milestones	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Large-scale mill run of PM web paper-completed																				
Joint devlopmt of new filter mtls w/Celanese-in progress																				
Evaluate PM web paper-3Q91																				
Charact. smoke TPM from novel filtr media filtrs-4Q91																				
Evaluate PM web papers w/other cellulose types as core materials of concentric filters																				
Evaluate additives coated on TELA/PM paper																				
Large-scale paper coating mill run																				
Evaluate filter materials from Courtalds-4Q91																				
Large-scale acetylated paper mill run																				

11/22/91

Rating: B

1992 - 1996 Five-Year Plan

Program Summary

Program: Ingredients Reduction

Category: Government Regulations/Product Dev **Included in 1991-1995 Plan:** Yes

Start Date: continuing **Completion Date:** continuing

Program Description

Reduce the total number of casing and flavor ingredients and simplify casing and flavor systems.
Reduce the number of materials that might have to appear on a package label with potential regulation.
Reduce the number of materials that must be controlled to assure compliance with foreign regulations.
Lessen the possibility of undesirable materal being used in product.
Use only ingredients that are truly effective for cigarette aroma and flavor.

Importance to PM-USA

Cigarette Labeling Act of 1985 required disclosure of cigarette ingredients to HHS.
Reduce the impact of potential labeling regulations.

Program Benefits

Measurable: Streamlined and effective casing and flavor systems.
Reduced number of components in control procedures.
Intangible: Lesser number of ingredients that can be criticized.

Program Leadership:

Functional Area R&D **Department** Flavor Tech **Program Leader:** F. Daylor

Support Required From	1992 Man-Years	Leadership Dept. (92)
Purchasing	0.1	2.0
Technical Services	0.1	
Flavor Center	0.1	
Flavor Center QA	0.2	

Capital Requirements (92) $ 00,000 **1993-1996** $ 00,000 **650 Timing**

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Continuing																				

2022950139

11/22/91

Rating: B

1992 - 1996 Five-Year Plan

Program Summary

Program: Reduction of Mainstream CO

Category: Product Development **Included in 1991-1995 Plan:** Yes

Start Date: 4th qtr 91 **Completion Date:** 4th qtr 92

Program Description

Develop catalysts for incorporation into cigarette filters which reduce the amount of CO delivered to smokers. Develop catalysts for incorporation into room air-handling systems for reducing the level of CO in the local environment.

Importance to PM-USA

Reduce the CO-to-tar ratio of new products and provide smoking environments more acceptable to smokers.

Program Benefits

Program Leadership:

Functional Area R&D **Department** **Program Leader:** J. Whidby

Support Required From	1992 Man-Years	Leadership Dept. (92)
Seton Hall University	2.7	0.5

Capital Requirements (92) $ Unknown **1993-1996** $ Unknown **650 Timing**

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Catalyst development for cigarette filters:																				
Design/Optimize catalysts																				
Develop supports for powered catalysts																				
Characterize mechanisms of CO conversion																				
Evaluate candidates in cigarette filters																				
Catalyst develoment for environmental CO:																				
Specify required catalyst properties-4Q91																				
Testing of candidate materials																				

2022950140

11/22/91

Rating: B

1992 - 1996 Five-Year Plan

Program Summary

Program: Sidestream Gas Phase Reduction

Category: Product Development **Included in 1991-1995 Plan:** No

Start Date: 1st qtr 92 **Completion Date:** Not yet defined

Program Description

Develop a cigarette paper containing an effective inorganic filler (catalyst) which will selectively alter the gas phase components of sidestream smoke.
Program has not yet been initiated.

Importance to PM-USA

Increase social acceptability of our products.

Program Benefits

Program Leadership:

Functional Area R&D **Department** **Program Leader:** J. Whidby

Support Required From	1992 Man-Years	Leadership Dept. (92)
		1.0

Capital Requirements (92) $ none **1993-1996** $ none **650 Timing**

Program Milestones	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Complete thorough literature search, technology evaluation, and develop a list of possible target approaches				■																
Initiate experimental work					■															

20229501 41

11/15/91

Rating: B

1992 - 1996 Five-Year Plan

Program Summary

Program: Aerosol Research

Category: Product Development **Included In 1991-1995 Plan:** Yes

Start Date: Ongoing **Completion Date:** 4th qtr 92/ongoing

Program Description

Establish new product concepts for smoking articles that produce aerosol without heat. The preferred means for aerosol generation has been demonstrated. A laboratory prototype should be completed by the end of 1992.

Importance to PM-USA

This project benefits the Company by generating alternatives to our conventional products which have the potential to supplement our full margin brands into the 21st century.

Program Benefits

Program Leadership:

Functional Area R&D **Department** Phys. Res. **Program Leader:** J. Whidby

Support Required From	1992 Man-Years	Leadership Dept. (92)
		3.0

Capital Requirements (92) $ Unknown **1993-1996** $ Unknown **650 Timing**

Program Milestones	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Laboratory prototype completed.																				

2022950142

11/22/91

Rating: C

1992 - 1996 Five-Year Plan

Program Summary

Program: Natural Flavors

Category: Governmental Regulations/Product Dev **Included In 1991-1995 Plan:** No

Start Date: 1st qtr 92 **Completion Date:** To be defined

Program Description

Develop natural processes to produce current ingredients obtained synthetically.
Develop natural processes to produce tobacco-identicall flavorants which are too expensive to be produced by standard methods. Program has not yet been initiated.
Planning will be done in 1992; program will start in 1992.

Importance to PM-USA

Pro-active response to potential cigarette labeling requirements.
Will give us new, potentially valuable flavorants which could provide a competitive advantage.

Program Benefits

Program Leadership:

Functional Area R&D **Department** _____ **Program Leader:** C. Ellis

Support Required From **1992 Man-Years** **Leadership Dept. (92)**
Not yet defined

Capital Requirements (92) $ _____ **1993-1996 $** _____ **650 Timing** _____

Program Milestones	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Feasibility, evaluation																				

2022950143

1992-1996 FIVE YEAR PLAN MAJOR PROGRAMS

Category: Leaf Supply

Program Title	Functional Area	Department	Leader	Rating	Ref.
Increase Brazilian Burley	Leaf	Purchasing	R. English	B	J-1
Increase Oriental Production - Malawi	Leaf	Purchasing	R. English	B	J-2
Expand Leaf Storage Facilities	Leaf	Leaf	F. Johnson	B	J-3
Agronomy Assistance to Latin America	Leaf	Agronomy	D. Hill	C	J-4

1992-1996 FIVE YEAR PLAN MAJOR PROGRAMS

Category:
Leaf Supply

Program Title	Functional Area	Department	Leader	Rating	Ref.
Increase Brazilian Burley	Leaf	Purchasing	R. English	B	J-1
Increase Oriental Production - Malawi	Leaf	Purchasing	R. English	B	J-2
Expand Leaf Storage Facilities	Leaf	Leaf	F. Johnson	B	J-3
Agronomy Assistance to Latin America	Leaf	Agronomy	D. Hill	C	J-4

2022950145

11/15/91

Rating: B

1992 - 1996 Five-Year Plan

Program Summary

Program: Increase Brazilian Burley

Category: Leaf **Included in 1991-1995 Plan:** No

Start Date: 3rd qtr 91 **Completion Date:** 4th qtr 96

Program Description

Underwrite a joint venture program with Universal Leaf in which ULT will double their production of burley in Brazil through constructing 3,625 barns over a five-year period. Capital required is $14.7 million which will be financed by ULT with guarantees from PM.

Importance to PM-USA

Develop and promote burley cultivation in Brazil to secure good quality leaf for PM, which is in short supply worldwide.

Program Benefits

ULT will supply 75% of all burley production on a crop-run basis at market prices. Securing the availability of factory grades will improve PM's ability to maintain grade standards.

Program Leadership:

Functional Area Leaf **Department** Purchasing **Program Leader:** R. English

Support Required From	1992 Man-Years	Leadership Dept. (92)
PME - Leaf	0.3	0.5
PMM - Brazil	0.3	

Capital Requirements (92) $ --- **1993-1996** $ --- **650 Timing** ---

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Additional Capacity:																				
945 barns - 1605 tons			■																	
819 barns - 1381 tons							■													
686 barns - 1157 tons											■									
619 barns - 1044 tons															■					
556 barns - 938 tons																			■	
TOTAL 3625 barns - 6125 tons																				

20229501 46

11/15/91

Rating: B

1992 - 1996 Five-Year Plan

Program Summary

Program: Increase Oriental Production - Malawi

Category: Leaf **Included in 1991-1995 Plan:** No

Start Date: 4th qtr 93 **Completion Date:** 1st qtr 96

Program Description

Develop the competitive and subjectively acceptable production of oriental tobacco in Malawi, Africa in collaboration with Limbe Leaf (Universal).

Importance to PM-USA

Increase production of oriental and spread our dependence over a larger geographical area and political environment

Program Benefits

Greater assurance of continued uniform supply

Program Leadership:

Functional Area Leaf **Department** Purchasing **Program Leader:** D. English

Support Required From **1992 Man-Years** **Leadership Dept. (92)**

Capital Requirements (92) $ --- **1993-1996 $** --- **650 Timing** --

Program Milestones

	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Determine quality (third crop)								■												
Determine quality potential (fourth crop)																■				
Increase/Decrease production																	■			

11/15/91

Rating: B

1992 - 1996 Five-Year Plan

Program Summary

Program: Expand Leaf Storage Facilities

Category: Leaf Supply **Included in 1991-1995 Plan:** No

Start Date: 4th qtr 91 **Completion Date:** 4th qtr 94

Program Description

Provide additionall leaf storage space for tobaccos as required by increases in cigarette production forecast.

Importance to PM-USA

To protect tobacco inventory until required for cigarette production. Constructing additional warehouses is the most effective means of doing so.

Program Benefits

The continued ability to operate cigarette factories without the constraint of tobacco shortages.

Program Leadership:

Functional Area Leaf **Department** Logistics **Program Leader:** F. Johnson

Support Required From	1992 Man-Years	Leadership Dept. (92)
Engineering	1.0	0.0

Capital Requirements (92) $ 17,175,000 **1993-1996** $ 13,400,000 **650 Timing** Curr

Program Milestones	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Completion of 7 warehouses																				
Completion of 7 warehouses																				
Completion of 7 warehouses																				
Completion of 4 warehouses																				

20229501 48

11/15/91

Rating: C

1992 - 1996 Five-Year Plan

Program Summary

Program: Agronomy Assistance to Latin America

Category: Leaf **Included in 1991-1995 Plan:** No

Start Date: 1st qtr 92 **Completion Date:** 4th qtr 96

Program Description

Three important areas of tobacco production management in Lati America have been identified as focal points for agronomic support: tobacco maturity, curing and farm grading. These areas all have pronounced impacts on leaf quality. In addition, efforts to improve the quantity of leaf by aiding in disease control, etc., will be addressed.

Importance to PM-USA

Program Benefits

Improved quality and quantity of tobaccos not only to the USA, but to PM Europe and Latin America, as well as Asian affiliates.

Program Leadership:

Functional Area Leaf **Department** Agronomy **Program Leader:** Dale Hill

Support Required From	1992 Man-Years	Leadership Dept. (92)
R&D (Semi-Works, C1)		2.0
TQAF		

Capital Requirements (92) $ --- **1993-1996** $ --- **650 Timing** --

Program Milestones	1992				1993				1994				1995				1996			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Argentina																				
Brazil																				
Costa Rica																				
Dominican Republic																				
Ecuador																				
Guatemala									Ongoing											
Mexico																				
Panama																				
Uruguay																				
Venezuela																				

2022950149

1992-1996 FIVE YEAR PLAN MAJOR PROGRAMS

Functional Area:
Employee Relations

Program Title	Category	Dept.	Leader	Rating	Ref.
Environmental Health & Safety - Haz. Materials	Safety	EH&S	S. Pouliot	A	F-1
Environmental Health & Safety - Training	Safety	EH&S	S. Pouliot	A	F-2
Environmental Health & Safety - Ergonomics	Safety	EH&S	S. Pouliot	A	F-3
Environmental Health & Safety - Audits	Safety	EH&S	S. Pouliot	A	F-4
Supervisory Training	Organization Health	Training	A. Dixon	A	H-1
Operator/Mechanic Skills Gap Training	Organization Health	Training	A. Dixon	A	H-2
Crafts Skills Training	Organization Health	Training	A. Dixon	A	H-3
Training Instructors	Organization Health	Training	A. Dixon	A	H-4
Systems Approach to Training	Organization Health	Training	A. Dixon	A	H-5
Operator/Mechanic Training - Troubleshooting	Organization Health	Training	A. Dixon	A	H-6
Louisville Skills Training Program	Organization Health	Training - LVL	W. Ham	A	H-7

1992-1996 FIVE YEAR PLAN MAJOR PROGRAMS

Functional Area: Engineering

Program Title	Category	Dept.	Leader	Rating	Ref.
Cabarrus Expansion	Capacity/Flexibility	Process Eng	J. Pastorius	A	C-1
MC Primary Modernization	Capacity/Flexibility	Process Eng	S. Blackwell	A	C-2
Optimize RL/BL Process	Capacity/Flexibility	Mfg. Eng.	J. Gomes	A	C-3
Cig Mfg Machine Maintenance	Cost/Productivity	York Mach. Cntr	B. Hassell	A	D-1
Charcoal Brands Productivity	Cost/Productivity	Machine Des Eng	G. Atwell	A	D-9
Louisville Productivity	Cost/Productivity	Machine Des Eng	W. Turnage	A	D-10
MC Bay 4 Productivity	Cost/Productivity	Machine Des Eng	G. Lyon	A	D-11
MC Bay 3 Productivity	Cost/Productivity	Machine Des Eng	G. Lyon	A	D-16
MC Bay 5 Productivity	Cost/Productivity	Machine Des Eng	G. Lyon	A	D-17
Product Vision Inspection	Quality	Applied Tech	E. Richardson	A	E-3
Site Environ. Audits / Process Verification	Environment	Env Compl/Eng	D. Merrill	A	G-1
Water Pollution	Environment	Env Compl/Eng	D. Merrill	A	G-2
Air Pollution	Environment	Env Compl/Eng	D. Merrill	A	G-3
Solid and Hazardous Waste	Environment	Env Compl/Eng	D. Merrill	A	G-4
Packaging Innovation	Product Development	Mach Des Eng	E. Woolridge	A	I-4
Improved Stem Capacity Increase	Capacity/Flexibility	Mfg Engineering	D. Ising	B	C-6
S/S Primary Process Modernization	Cost/Productivity	Process Eng	J. Vaughan	B	D-18
Primary Technology	Cost/Productivity	Applied Tech	G. Reid	B	D-19
Project GOLD	Cost/Productivity	Applied Tech	J. Carboni	B	D-20
S/S Cigarette Manufacturing Modernization	Cost/Productivity	Mfg Engineering	C. Hamilton	B	D-23
Tobacco Reclamation - Finished Goods	Cost/Productivity	IE/PE/MfgEng	B. Poorbaugh	C	D-28
Tobacco Handling	Cost/Productivity	Process Eng	H. Marxen	C	D-29

1992-1996 FIVE YEAR PLAN MAJOR PROGRAMS

Functional Area:
Leaf

Program Title	Category	Dept.	Leader	Rating	Ref.
US Marlboro Development	Product Development	Blending	R. Keatts	A	I-3
RL Squares	Cost/Productivity	Blending	C. Moogalian	B	D-25
Burley Stem Ultilization	Cost/Productivity	Blending	L. Jennings	B	D-26
Green Leaf Threshing Standards	Cost/Productivity	Blending	L. Jennings	B	D-27
Corp. Brand-Worldwide Subjective Evaluation	Quality	Blending	D. Heidsieck	B	E-12
Tobacco Particle Size Analysis for High Speed M	Quality	Blending	Jennings	B	E-13
Product Development - Asia	Product Development	Blending	B. Scott	B	I-10
Product Development - Latin America	Product Development	Blending	B. Scott	B	I-11
Japan Marlboro Development 85/100mm	Product Development	Blending	C. Brumberg	B	I-9
Increase Brazilian Burley	Leaf Supply	Purchasing	R. English	B	J-1
Increase Oriental Production - Malawi	Leaf Supply	Purchasing	R. English	B	J-2
Expand Leaf Storage Facilities	Leaf Supply	Leaf	F. Johnson	B	J-3
Hogshead Material - Damage	Cost/Productivity	Hogshead Repai	H. Oakes	C	D-40
Green Tobacco Packing	Cost/Productivity	Purchasing	H. Oakes	C	D-41
Allocation of Tobaccos for Stemming	Cost/Productivity	Purchasing	H. Oakes	C	D-42
Trucking Cost Simulation	Cost/Productivity	Purchasing	H. Oakes	C	D-43
Blended Strips Reformulation	Quality	Blending	D. Heidsieck	C	E-16
Agronomy Assistance to Latin America	Leaf Supply	Agronomy	D. Hill	C	J-4

1992-1996 FIVE YEAR PLAN MAJOR PROGRAMS

Functional Area: Manufacturing

Program Title	Category	Dept.	Leader	Rating	Ref.
Tobacco Utilization	Cost/Productivity	Productivity	C. Horner	C	D-30

1992-1996 FIVE YEAR PLAN MAJOR PROGRAMS

Functional Area:
Mfg. Services

Program Title	Category	Dept.	Leader	Rating	Ref.
MRO Optimization/Alternative Sourcing	Cost/Productivity	MRO	Miles	A	D-2
Supply Chain Initiative - Global Description	Cost/Productivity	Supply Chain	Gee	A	D-3
Direct Materials Planning, Procurement	Cost/Productivity	Supply Chain	Gee	A	D-4
Finished Goods Warehousing and Distribution	Cost/Productivity	Supply Chain	Gee	A	D-5
Integrated Product Information	Cost/Productivity	Supply Chain	Gee	A	D-6
Integrated Prod/Resource Planning Control	Cost/Productivity	Supply Chain	Gee	A	D-7
Finished Goods - A.T. Kearney Study	Cost/Productivity	Finished Goods	J. McKinney	A	D-8
Synergy Program - Consolidated PM-USA	Cost/Productivity	New Programs	Zinski	A	D-14
Purchasing Optimization	Cost/Productivity	Purchasing	Latshaw	A	D-15
Visual/Functional Quality Standards	Quality	QA Prod Audit	C. Krausse	A	E-1
Quality Awareness Beyond Manufacturing	Quality	Quality	Knudson	A	E-7
Consumer Complaint Analysis - TOS	Quality	Quality	Knudson	A	E-8
Minority Business Development Acceleration	Organization Health	Minority Bus.	Kosakowski	A	H-8
Retail Promotion Execution	Capacity/Flexibility	Commercial De	M. Suter	B	C-7
Woodpulp Cigarette Paper	Cost/Productivity	Chem. Comp	F. Forsmark	B	D-21
Direct Materials Warehouse Mgmt System	Cost/Productivity	DM Warehouse	B. Gerrity	B	D-22
Label Closure Format Standardization	Cost/Productivity	Purchasing	Latshaw	B	D-24
On Press Vision Inspection	Quality	Purchasing	Latshaw	B	E-10
Offset Printing - Subjective Impact	Quality	PTS	C. Campbell	B	E-9
Incineration and Dryer Replacement - CHP	Environment	Col Heights Pck	B. Roberts	B	G-5
Replace underground solvent tank - CHP	Environment	Col Heights Pck	B. Roberts	B	G-6
Water Based Gravure Inks	Environment	PTS	C. Campbell	B	G-7
Packaging Materials Environmentall Compliance	Environment	Purchasing	Latshaw	B	G-8
Inventory Control Systems	Capacity/Flexibility	Finished Goods	J. McKinney	C	C-8
Production Planning Simulation Model	Capacity/Flexibility	PP&C	Bylsma	C	C-9
Licorice Sourcing Optimization	Cost/Productivity	Chem. Comp	F. Forsmark	C	D-31
Label Paper Consolidation	Cost/Productivity	Packaging	C. Campbell	C	D-32

1992-1996 FIVE YEAR PLAN MAJOR PROGRAMS

Functional Area:
Mfg. Services

Program Title	Category	Dept.	Leader	Rating	Ref.
MRO Optimization/Paperless Requisition	Cost/Productivity	MRO	Miles	C	D-34
Company Book Inventory/WH Reconciliation	Cost/Productivity	Customer Svce	B. Pearce	C	D-35
Charge Back System For Transportation	Cost/Productivity	DM Warehouse	B. Gerrity	C	D-36
Electronic Data Interchange with Carrier	Cost/Productivity	Transportation	D. Schafer	C	D-37
Two Way EDI with Public Warehouses	Cost/Productivity	Transportation	D. Schafer	C	D-38
Printing Press - CHP	Cost/Productivity	Col Heights Pck	B. Roberts	C	D-39

1992-1996 FIVE YEAR PLAN MAJOR PROGRAMS

Functional Area:
R&D

Program Title	Category	Dept.	Leader	Rating	Ref.
Cast Leaf	Capacity/Flexibility	Process Dev	G. Gellatly	A	C-4
NET Development	Capacity/Flexibility	Tob Fund Div	Fischer/Wms	A	C-5
New Primary Process	Cost/Productivity	Process Dev	S. Clark	A	D-13
Adhesives	Quality	Analy Spc	Zimmerman	A	E-6
Full Margin Brand Extensions Domestic	Product Development	Cig. Developmt	C. Altizer	A	I-1
Export	Product Development	Exp Prod Dev	J. Smith	A	I-2
Project Tomorrow	Product Development	Proj Tommorow	B. Dwyer	A	I-5
Lotus and Ambrosia	Product Development	Paper Dev	T. Sanders	A	I-6
Beta	Product Development	Prod Dev	C. Lilly	A	I-7
DeNic/HalfNic	Product Development	Flavor Tech	G. Yatrakis	A	I-8
Stable Menthol	Quality	Flavor Tech	H. Burnley	B	E-11
Web Filter Program	Product Development	Product Dev	D. Heretick	B	I-12
Ingredients Reduction	Product Development	Flavor Tech	F. Daylor	B	I-13
Reduction - Mainstream CO	Product Development	Product Dev	J. Whidby	B	I-14
Sidestream Gas Phase Reduction	Product Development	Product Dev	J. Whidby	B	I-15
Aerosol Research	Product Development	Product Dev	J. Whidby	B	I-16
Cigarette Paper Consolidation	Cost/Productivity	Prod Developmt	S. Baldwin	C	D-33
Lark Porous Combining Wrap	Quality	Filter Tech	T. Callaham	C	E-14
Product/Process Monitoring Technology	Quality	Prod Dev	T. Sanders	C	E-15
Natural Flavors	Product Development	Product Dev	C. Ellis	C	I-17

1992-1996 FIVE YEAR PLAN MAJOR PROGRAMS

Functional Area:
Technical Svcs

Program Title	Category	Dept.	Leader	Rating	Ref.
Specification Consolidation	Cost/Productivity	Spec/Support	L. Watts	A	D-12
Quality Control Standardization	Quality	Technical Svcs	M. Willard	A	E-2
Good Manufacturing Practices	Quality	Spec/Support	J. Hutchison	A	E-4
Direct Materials Specifications	Quality	Spec/Support	S. Southard	A	E-5